

PRACTICE EXAM 2: HPM CERTIFICATION SIMULATION (240 QUESTIONS)

1. A 73-year-old woman with metastatic non-small cell lung cancer presents with progressive fatigue, confusion, and constipation over one week. Her serum calcium, corrected for albumin, is 13.6 mg/dL. Her oncologist plans to treat the hypercalcemia. After initiating aggressive IV saline hydration, calcitonin is administered as a bridge agent. Which statement best explains why calcitonin is used as a bridge rather than as a definitive treatment?

- A. Calcitonin is too expensive for sustained use and must be replaced after the initial loading dose
- B. Tachyphylaxis to calcitonin develops within approximately 48 hours, limiting its sustained effectiveness despite its rapid onset of calcium-lowering action
- C. Calcitonin causes fatal bone marrow suppression with use beyond 72 hours
- D. Calcitonin is effective only for osteolytic hypercalcemia and has no effect on humoral mechanisms

2. A 65-year-old man with advanced hepatocellular carcinoma and portal hypertension develops tense ascites requiring paracentesis every 10 days. His MELD score is 31 and he is not a transplant candidate. He asks about diuretics to reduce the frequency of paracentesis. Given that his ascites is primarily caused by portal hypertension, which diuretic regimen is most likely to provide meaningful benefit?

- A. Furosemide alone at 80 mg daily for aggressive volume reduction
- B. Hydrochlorothiazide 25 mg daily as a first-line agent for portal hypertensive ascites
- C. Diuretics are ineffective for all forms of malignant ascites regardless of mechanism
- D. Combined spironolactone 100 mg and furosemide 40 mg daily, titrated to response

3. A palliative care physician is conducting a goals-of-care conversation with a 71-year-old man with metastatic prostate cancer. After providing medical information about his prognosis, the physician asks, "Are there any conditions or situations that you would consider worse than death?" This question is designed to elicit which of the following?

- A. The patient's threshold for unacceptable outcomes, which helps define the limits of treatment that align with his values
- B. Whether the patient is experiencing suicidal ideation requiring psychiatric intervention
- C. The patient's religious beliefs about the afterlife and divine punishment
- D. The patient's understanding of his medical diagnosis and disease stage

4. A 58-year-old woman with stage IV ovarian cancer has been taking oxycodone CR 60 mg every 12 hours for cancer-related pain. She develops progressive renal insufficiency with a GFR declining from 55 to 15 mL/min over three weeks. She remains cognitively intact and her pain is well-controlled. Which of the following opioid-related concerns is most important to address given her declining renal function?

- A. Oxycodone has no renal concerns and can be continued at the same dose indefinitely
- B. Oxycodone should be immediately replaced with meperidine, which is safer in renal failure
- C. Oxycodone is partially metabolized by CYP2D6 to oxymorphone, and accumulation of metabolites in renal failure requires close monitoring with potential dose reduction or rotation to fentanyl
- D. Oxycodone must be discontinued because all opioids are contraindicated when GFR falls below 30 mL/min

5. A hospice nurse is visiting a 79-year-old man with end-stage heart failure who is actively dying at home. The patient's wife reports that he has not urinated in 10 hours. On examination, the nurse finds a distended, palpable bladder. The patient is moaning and appears uncomfortable. His morphine infusion is running at the prescribed rate. What is the most appropriate immediate intervention?

- A. Increase the morphine infusion to address presumed undertreated cancer pain
- B. Place a urinary catheter to relieve bladder distension, which is likely contributing to his discomfort and agitation
- C. Administer haloperidol for terminal agitation without further assessment
- D. Reposition the patient and apply a warm compress to the suprapubic area

6. A 52-year-old woman with metastatic breast cancer has been experiencing severe neuropathic pain in her right arm from brachial plexopathy. She is currently on gabapentin 800 mg three times daily with partial relief and morphine sustained-release 60 mg every 12 hours. Her palliative care physician wants to add a second adjuvant analgesic. She also reports depressed mood, poor appetite, and insomnia.

Which single medication addition would most efficiently address both her residual neuropathic pain and her depressive symptoms?

- A. Pregabalin 75 mg twice daily, which treats neuropathic pain and has anxiolytic properties
- B. Amitriptyline 25 mg at bedtime for dual neuropathic pain and sleep benefit
- C. Methylphenidate 5 mg twice daily for rapid-onset antidepressant effect and energy improvement
- D. Duloxetine 30 mg daily titrated to 60 mg, which has demonstrated efficacy for both neuropathic pain and major depression

7. A 69-year-old man with end-stage COPD on hospice tells his hospice physician, "I want to die at home, but I'm terrified of suffocating. Promise me I won't suffer." The physician responds, "I understand that fear, and I want you to know that we have very effective medications to make sure you don't feel short of breath. We will be with you through this, and our goal is your comfort." This response addresses the patient's concern by combining which two communication elements?

- A. Support (committing to continued care and presence) and Knowledge (providing factual information about symptom management capabilities)
- B. Invitation (asking how much information the patient wants) and Perception (assessing current understanding)
- C. Setting (establishing the physical environment) and Strategy (outlining next clinical steps)
- D. Respect (acknowledging the patient's courage) and Explore (asking about additional fears)

8. A 76-year-old man with advanced Alzheimer's disease (FAST Stage 7D) has been on hospice for six months. He develops a stage 3 pressure injury on his sacrum, has had one episode of aspiration pneumonia treated with antibiotics, and has lost 15% of his body weight over the past year. His serum albumin is 2.3 g/dL. His family asks whether he still qualifies for hospice. Based on Medicare hospice eligibility criteria for dementia, which of the following is the most accurate assessment?

- A. He no longer qualifies because he has survived beyond the initial six-month prognosis estimate
- B. His FAST stage of 7D is insufficient for hospice eligibility, which requires Stage 7F or beyond
- C. He meets eligibility criteria with FAST Stage 7D plus multiple comorbid conditions (pressure injury, aspiration pneumonia, weight loss with low albumin) supporting a six-month prognosis
- D. His response to antibiotic treatment for pneumonia demonstrates that he is not terminally ill

9. A 61-year-old woman with advanced pancreatic cancer develops sudden onset of right-sided weakness, slurred speech, and confusion. CT head reveals a hemorrhagic stroke. She has a POLST indicating comfort measures only and DNR status. Her daughter, who is her health care proxy, is at the bedside. The emergency physician asks the palliative care team for guidance. Which of the following represents the most appropriate immediate approach?

- A. Transfer to the neurosurgical ICU for emergent craniotomy regardless of the POLST
- B. Honor the POLST by focusing on symptom management (pain control, seizure prevention, comfort measures) while providing emotional support to the daughter and ensuring comfort
- C. Revoke the POLST because the stroke represents a new, potentially treatable condition unrelated to her cancer
- D. Withhold all interventions including symptom management because the POLST indicates comfort measures only

10. A 44-year-old man with advanced sarcoma has been on a stable dose of transdermal fentanyl 100 mcg/hour for two months with good pain control. He is admitted to the hospital with appendicitis and undergoes appendectomy under general anesthesia. Postoperatively, the surgical team discontinues his fentanyl patch and writes for IV morphine PRN only. The patient wakes from anesthesia in severe pain and distress. What is the most significant error in the surgical team's postoperative pain management?

- A. Abrupt discontinuation of a chronic transdermal fentanyl patch without equivalent opioid coverage will result in both uncontrolled pain and opioid withdrawal, in addition to the new surgical pain
- B. The surgical team should have replaced the fentanyl patch with a higher-dose patch to cover both baseline and surgical pain
- C. IV morphine should never be used in combination with fentanyl due to receptor competition
- D. The appendectomy should have been postponed until the fentanyl patch could be weaned over two weeks

11. A 78-year-old woman with end-stage heart failure (NYHA Class IV, EF 12%) has an ICD and a left ventricular assist device implanted as destination therapy. She has been on hospice for two months and is now actively dying. Over the past 24 hours, her ICD has fired three times. The shock function was supposed to have been deactivated but has not yet been reprogrammed. The device representative is unavailable for six hours. Which of the following is the correct immediate intervention to stop the shocks?

- A. Administer IV amiodarone 150 mg to suppress the arrhythmia triggering the shocks
- B. Turn off the LVAD power, which will simultaneously disable the ICD shock function
- C. Increase the morphine infusion to sedate the patient through subsequent shocks
- D. Place a strong magnet over the ICD generator in the left upper chest and tape it in position to suspend shock delivery until the device representative arrives

12. A 55-year-old man with metastatic colon cancer develops new-onset severe headache, papilledema, and projectile vomiting without preceding nausea. A brain MRI reveals three new brain metastases with significant surrounding edema. His nausea has not responded to ondansetron 8 mg IV. Based on the most likely mechanism of his nausea, which of the following is the most appropriate targeted antiemetic intervention?

- A. Metoclopramide 10 mg IV every 6 hours for prokinetic effect on gastric emptying
- B. Scopolamine transdermal patch for vestibular-mediated nausea
- C. Dexamethasone 16 mg IV to reduce cerebral edema and intracranial pressure, which is the mechanism driving his vomiting
- D. Lorazepam 1 mg IV for anticipatory nausea mediated by higher cortical centers

13. A 64-year-old woman with stage IV breast cancer and multiple bone metastases has been on chronic opioid therapy. Her current regimen is hydromorphone 8 mg PO every 4 hours. She requires conversion to a continuous subcutaneous infusion because she can no longer swallow. Her total 24-hour oral hydromorphone dose is 48 mg. Using the equianalgesic table (oral hydromorphone 7.5 mg = parenteral hydromorphone 1.5 mg), what is the correct 24-hour subcutaneous hydromorphone dose?

- A. 48 mg subcutaneous hydromorphone per 24 hours (same as the oral dose)
- B. 9.6 mg subcutaneous hydromorphone per 24 hours
- C. 24 mg subcutaneous hydromorphone per 24 hours (half the oral dose)
- D. 4.8 mg subcutaneous hydromorphone per 24 hours

14. A palliative care team receives a consultation for a 70-year-old man with end-stage liver disease who has been refusing all food and fluids for three days. He is cognitively intact and states clearly, "I am ready to die. I do not want anything more." His wife is distraught and asks the team to place an IV for fluids and a feeding tube. The patient reiterates his refusal. Which ethical principle most directly supports honoring the patient's decision?

- A. Autonomy — a competent patient has the right to refuse any medical treatment, including nutrition and hydration
- B. Beneficence — the physician's duty to act in the patient's best interest by providing nutrition
- C. Justice — the fair allocation of resources dictates that treatment should go to patients who want it
- D. Non-maleficence — the duty to avoid harm requires preventing starvation at all costs

15. A 62-year-old woman with advanced ovarian cancer has refractory nausea and vomiting from malignant bowel obstruction. She is not a surgical candidate. Her current regimen includes octreotide 200 mcg SC three times daily, glycopyrrolate 0.4 mg SC every 6 hours, and dexamethasone 8 mg IV daily. Despite this regimen, she continues to vomit 400 mL daily. Which of the following is the most appropriate next step to reduce her vomiting and improve her comfort?

- A. Add metoclopramide 10 mg IV every 6 hours for additional prokinetic effect
- B. Increase the dexamethasone to 32 mg daily to further reduce peritumoral edema
- C. Start total parenteral nutrition to address the nutritional deficit caused by persistent vomiting
- D. Place a venting gastrostomy tube for intermittent decompression, which may allow her to eat small amounts for pleasure

16. A hospice medical director is reviewing a case in which a hospice physician certified a patient with COPD for hospice. The certification narrative states: "70-year-old male with severe COPD, FEV1 28% predicted, oxygen-dependent at rest, three hospitalizations in the past year for exacerbations including two ICU admissions requiring BiPAP, progressive functional decline from independent ambulation to wheelchair-dependent over 6 months, cor pulmonale on echocardiogram, BMI 18.5 with 8% weight loss. Clinical trajectory consistent with a prognosis of six months or less." This narrative is which of the following?

- A. Deficient because it does not include the patient's exact date of COPD diagnosis
- B. Deficient because it exceeds the maximum allowable length for certification narratives
- C. Adequate because it provides specific clinical findings, functional trajectory, disease-specific prognostic markers, and a clinical rationale supporting the six-month prognosis
- D. Deficient because it does not include the results of a recent arterial blood gas analysis

17. A 57-year-old man with advanced gastric cancer is enrolled in hospice. His wife tells the hospice social worker that her husband has been secretly stockpiling his morphine tablets — taking fewer than prescribed and hiding the extras. When asked directly, the patient admits he is saving the pills "in case things get really bad and I want to end it quickly." His current pain is rated 5/10, and he denies active suicidal intent. Which of the following is the most appropriate initial response?

- A. Report the patient to law enforcement for illegal stockpiling of controlled substances
- B. Explore what is driving his behavior (fear of uncontrolled suffering, desire for control, depression), optimize his pain management, secure the medications, and involve the interdisciplinary team in developing a comprehensive plan that addresses his fears
- C. Confiscate all medications immediately and switch to a patient-controlled analgesia pump to prevent further stockpiling
- D. Respect the patient's autonomy and allow him to continue stockpiling as a valid expression of self-determination

18. A 74-year-old woman with metastatic colorectal cancer is receiving palliative chemotherapy with FOLFOX. She develops bilateral numbness and tingling in her feet in a symmetric stocking distribution. The symptoms started three cycles ago and have been progressively worsening. She now has difficulty feeling the floor under her feet and has fallen twice. This presentation is most consistent with which of the following?

- A. Chemotherapy-induced peripheral neuropathy (CIPN) from oxaliplatin, presenting as a length-dependent, symmetric sensorimotor polyneuropathy
- B. Spinal cord compression from metastatic disease causing bilateral lower extremity symptoms
- C. Paraneoplastic Lambert-Eaton syndrome associated with colorectal cancer
- D. Diabetic neuropathy unrelated to her chemotherapy treatment

19. A 66-year-old man with end-stage renal disease on chronic hemodialysis has decided to discontinue dialysis after extensive discussion with his family and the palliative care team. He is enrolled in hospice. His wife asks what symptoms to expect and how they will be managed. Which of the following symptom trajectories is most accurate for the typical course after dialysis discontinuation?

- A. Immediate onset of seizures and cardiac arrest within 24 hours of the last treatment
- B. Rapid development of severe, uncontrollable pain as the primary symptom within 48 hours

- C. Sudden onset of massive fluid overload requiring emergency intubation within 72 hours
- D. Gradual development of fatigue, drowsiness, decreased appetite, nausea, and progressive somnolence from uremia over 7–14 days, with death typically from hyperkalemia or uremic encephalopathy

20. A 48-year-old woman with advanced cervical cancer and known retroperitoneal lymphadenopathy has bilateral lower extremity lymphedema. Her legs are heavy, uncomfortable, and significantly limiting her mobility. She has been prescribed furosemide 40 mg daily by her primary care physician. The palliative care team notes that her edema is non-pitting with thickened skin and a positive Stemmer's sign. Why is furosemide unlikely to be effective for her edema?

- A. Furosemide is contraindicated in patients with cancer because it accelerates tumor growth
- B. Furosemide is effective only for edema caused by renal failure, not cardiac or hepatic causes
- C. Lymphedema results from lymphatic obstruction, not fluid overload — furosemide removes intravascular fluid but cannot address the protein-rich interstitial fluid that accumulates from impaired lymphatic drainage
- D. Furosemide is ineffective in patients under age 50 due to enhanced renal compensation

21. A 71-year-old man with advanced lung cancer is being transferred from the hospital to home hospice. He is currently on IV hydromorphone at 0.5 mg/hour (12 mg/24 hours IV). The discharge team plans to convert to oral hydromorphone for home use. Using the standard equianalgesic table (parenteral hydromorphone 1.5 mg = oral hydromorphone 7.5 mg), what is the correct total 24-hour oral hydromorphone dose?

- A. 12 mg oral hydromorphone per day (same number as the IV dose)
- B. 60 mg oral hydromorphone per day
- C. 6 mg oral hydromorphone per day (half the IV dose)
- D. 90 mg oral hydromorphone per day (applying a 7.5:1 ratio to the hourly rate)

22. A 63-year-old woman with metastatic pancreatic cancer has been on hospice for three weeks. She is comfortable on her current pain regimen. She develops a fever of 38.8°C, productive cough, and right-sided pleuritic chest pain. A clinical diagnosis of community-acquired pneumonia is made. She is alert, oriented, and enjoying visits from her grandchildren. Her prognosis apart from the pneumonia is estimated at 2–3 months. Which of the following is the most appropriate approach to antibiotic therapy?

- A. Withhold antibiotics because the patient is on hospice and all infections represent the natural dying process
- B. Transfer to the hospital for IV antibiotics and chest CT to rule out pulmonary embolism
- C. Administer antipyretics for fever but defer antibiotics until the infection is confirmed by sputum culture
- D. Treat with oral antibiotics because the pneumonia is causing distressing symptoms in a patient with a multi-month prognosis who is otherwise enjoying quality of life

23. A 70-year-old woman with advanced breast cancer is referred to palliative care for pain management. She reports a burning, electric-shock-like pain in her chest wall at the site of a previous thoracotomy performed two years ago. The pain worsens with light touch over the surgical scar (allodynia) and is constant with intermittent lancinating exacerbations. Her current regimen includes acetaminophen 650 mg every 6 hours with minimal relief. This pain is best classified as which of the following?

- A. Chronic post-surgical neuropathic pain with features of allodynia and central sensitization
- B. Recurrent chest wall tumor causing somatic nociceptive pain
- C. Visceral nociceptive pain referred from hepatic metastases to the chest wall
- D. Psychosomatic pain from anxiety about cancer recurrence

24. A hospice interdisciplinary team is developing a bereavement risk assessment for the family of a patient who died yesterday. The patient's 50-year-old son was estranged from his father for 15 years and only reconciled during the final week of the patient's life. He expresses profound guilt about the lost years and states, "I can never forgive myself for not being there." Based on established risk factors for complicated bereavement, which of the following features of this situation places him at highest risk?

- A. His gender, as men are universally at higher risk for complicated grief than women
- B. The death occurring in a hospice setting rather than at home
- C. The ambivalent and conflicted nature of the relationship, with unresolved guilt and a recent reconciliation that may not have fully addressed years of estrangement
- D. His age of 50, which places him in the highest-risk age group for bereavement complications

25. A 67-year-old man with advanced prostate cancer is on morphine sustained-release 90 mg every 12 hours. He has been on this dose for four months. At a routine visit, you note that he has not had a bowel movement in nine days. He is bloated, uncomfortable, and has diminished bowel sounds. He has been taking senna 2 tablets at bedtime. A rectal examination reveals a vault packed with hard stool. After manual disimpaction and a sodium phosphate enema, what is the most important change to his bowel regimen going forward?

- A. Significantly escalate his standing laxative regimen — increase senna to 4 tablets twice daily, add polyethylene glycol daily, and reinforce that prophylactic laxatives must be taken consistently for the entire duration of opioid therapy because tolerance to constipation does not develop
- B. Discontinue the opioids and switch to a non-opioid pain management plan to eliminate constipation
- C. Replace senna with docusate alone, which is sufficient for maintenance therapy
- D. Prescribe methylnaltrexone immediately as the first-line agent without optimizing conventional laxatives

26. A 55-year-old woman with advanced cervical cancer and a recently placed intrathecal pump for refractory pelvic pain presents to the emergency department with acute onset of severe headache, nausea, and diffuse back pain. The headache worsens when she sits up and improves when she lies flat. Her intrathecal pump was refilled two days ago. Which of the following complications of the intrathecal drug delivery system is most likely responsible for her symptoms?

- A. Granuloma formation at the catheter tip causing spinal cord compression
- B. Cerebrospinal fluid leak from the catheter insertion site or a catheter connection, causing a low-pressure (post-dural puncture) headache
- C. Intrathecal morphine overdose from pump malfunction delivering an excessive bolus
- D. Bacterial meningitis from contamination during the pump refill procedure

27. An 80-year-old man with advanced heart failure is enrolled in hospice. His wife asks the hospice nurse, "How will I know when he's getting close to the end?" Which combination of clinical signs, when present together, is most reliably associated with death within 72 hours?

- A. Increased appetite, improved alertness, and a temporary rally in functional status
- B. Stable vital signs with persistent peripheral edema and unchanged functional status
- C. New onset of hypertension, tachycardia, and increased urine output from fluid mobilization

D. Cheyne-Stokes respirations, peripheral mottling extending above the knees, mandibular breathing, decreased urine output, and loss of radial pulse

28. A 62-year-old man with advanced hepatocellular carcinoma and Child-Pugh C cirrhosis requires opioid therapy for abdominal pain from hepatic capsule distension. His GFR is 70 mL/min (normal renal function). The palliative care team is selecting an appropriate opioid. Which of the following considerations is most important in guiding opioid selection for this patient?

- A. All opioids are equally safe in hepatic impairment because the liver has significant metabolic reserve
- B. Codeine is the safest choice because it is a prodrug that requires minimal hepatic activation
- C. Morphine and hydromorphone, metabolized by glucuronidation (which is relatively preserved until late-stage liver failure), are generally preferred, but oral doses should be reduced because decreased first-pass metabolism increases oral bioavailability
- D. Fentanyl is contraindicated in all patients with liver disease regardless of severity

29. A palliative care physician is meeting with a 45-year-old woman with metastatic ovarian cancer who has just been told that her chemotherapy has failed. She is sobbing and says, "I can't believe this is happening. My kids need me." The physician feels the urge to offer reassurance by discussing treatment alternatives. Based on communication best practices, what should the physician do first?

- A. Respond to the emotion before providing any clinical information — acknowledge her pain, validate her feelings, and allow silence before transitioning to a discussion of next steps
- B. Immediately outline the remaining treatment options to give her hope and redirect her emotional distress
- C. Contact the social worker to provide emotional support so the physician can focus on the medical plan
- D. Ask her directly whether she wants to discuss her feelings or her treatment options to determine the next step

30. A 72-year-old man with COPD and newly diagnosed stage IV lung cancer is referred to palliative care. The oncologist states, "I referred him early because I know palliative care improves outcomes when started at diagnosis." This referral pattern is supported by which landmark clinical trial?

- A. The SUPPORT trial, which demonstrated that nurse-facilitated advance care planning reduced ICU admissions
- B. The Temel trial, which demonstrated that early palliative care concurrent with standard oncologic care in metastatic non-small cell lung cancer improved quality of life, reduced depression, and was associated with longer survival compared to standard care alone
- C. The Patchell trial, which demonstrated that surgery plus radiation is superior to radiation alone for spinal cord compression
- D. The Bruera hydration study, which demonstrated that parenteral hydration does not improve symptoms in the final weeks of life

31. A 66-year-old woman with metastatic breast cancer is taking morphine sustained-release 120 mg every 12 hours. She develops new-onset bilateral hearing loss and is diagnosed with sensorineural hearing loss requiring evaluation. Her oncologist is concerned about the possibility of leptomeningeal carcinomatosis and orders a gadolinium-enhanced MRI of the brain. The MRI results are pending. In the meantime, the patient reports that her pain has been well-controlled, but she has been feeling increasingly drowsy. Her creatinine has risen from 1.0 to 2.8 mg/dL over the past two weeks. The most likely cause of her increasing drowsiness is which of the following?

- A. Leptomeningeal carcinomatosis causing progressive obtundation from brainstem involvement
- B. Depression manifesting as hypersomnia from the psychological burden of her worsening disease
- C. A side effect of the gadolinium contrast agent used in the pending MRI study
- D. Accumulation of morphine's active metabolite M6G due to declining renal function, causing progressive opioid-related sedation

32. A 58-year-old man with advanced esophageal cancer has been enrolled in hospice for six weeks. He is experiencing dysphagia that has progressed to the point where he can swallow only thin liquids with difficulty. His current oral medications include gabapentin 300 mg capsules three times daily, dexamethasone 4 mg tablets daily, senna 2 tablets at bedtime, and morphine sustained-release 30 mg tablets every 12 hours. He can no longer swallow tablets. Which medication poses the greatest safety risk if the conversion to an alternative route is not handled correctly?

- A. Gabapentin, because abrupt discontinuation causes rebound seizures in all patients
- B. Senna, because sudden cessation will cause bowel perforation within 48 hours

C. Morphine sustained-release, because converting from oral to an alternative route requires accurate equianalgesic calculation and because abrupt cessation will cause both uncontrolled pain and opioid withdrawal

D. Dexamethasone, because it has no alternative formulations available

33. A 14-year-old girl with relapsed osteosarcoma and known pulmonary metastases has been declining over the past month. She tells her palliative care physician in a private conversation, "I know I'm dying. I don't want any more chemo. But my parents keep saying I have to fight. They won't listen to me." She is cognitively mature and has been managing her own medication schedule for two years. Which of the following is the most appropriate next step?

A. Facilitate a family meeting that includes the adolescent, her parents, and the palliative care team to explore the adolescent's wishes, the parents' concerns, and to work toward alignment while respecting the developing autonomy of this mature minor

B. Override the adolescent's preferences and defer entirely to the parents' decision because she is a minor

C. Comply with the adolescent's request and discontinue chemotherapy without parental knowledge

D. Refer the adolescent to psychiatric evaluation because her refusal of treatment indicates depression

34. A 68-year-old man with advanced non-small cell lung cancer and bone metastases has been on opioid therapy for six months. At a routine visit, his urine drug screen is positive for his prescribed oxycodone but is also unexpectedly positive for benzodiazepines. He has no benzodiazepine prescription. When asked, he states that a friend gave him diazepam for sleep because he has been having severe insomnia. Which of the following is the most appropriate response?

A. Immediately discharge the patient from the practice for violating the treatment agreement

B. Acknowledge the insomnia as a legitimate concern, explain the risks of combining unprescribed benzodiazepines with opioids (respiratory depression, sedation, falls), address his insomnia with appropriate treatment, and document the conversation and plan

C. Ignore the finding because benzodiazepines are not opioids and are not relevant to the opioid treatment agreement

D. Report the patient and his friend to law enforcement for illegal distribution of controlled substances

35. A 75-year-old man with advanced Parkinson's disease has progressive dysphagia with recurrent aspiration events. His speech-language pathologist recommends thickened liquids and a pureed diet. The

patient, who is cognitively intact, refuses these recommendations, stating, "I'd rather enjoy my food and take the risk." His wife is distressed and asks the physician to "make him follow the diet." Which of the following is the most appropriate response?

- A. Agree with the wife and document a physician order for mandatory diet modification
- B. Consult an ethics committee to override the patient's decision for his own safety
- C. Insert a prophylactic gastrostomy tube to bypass the dysphagia entirely
- D. Honor the patient's informed decision, ensure he understands the aspiration risks, document the discussion, and counsel the wife that this is a valid exercise of the patient's autonomy

36. A hospice nurse visits a 77-year-old woman with end-stage COPD who has been on hospice for four months. The patient's husband reports that his wife has been having "good days and bad days" over the past month — some days she is alert, eating, and conversing, and other days she is very fatigued and sleeps most of the day. He asks whether the fluctuating course means she is "getting better." Which of the following statements best explains this pattern?

- A. Fluctuating function with overall gradual decline is characteristic of the organ failure trajectory — good days do not indicate recovery but rather reflect the natural oscillation within an overall declining trajectory
- B. The good days indicate that her COPD is responding to her current treatment and she may no longer qualify for hospice
- C. The fluctuating pattern suggests a new diagnosis — such as a cancer — superimposed on her COPD
- D. The pattern is inconsistent with any recognized disease trajectory and requires further diagnostic evaluation

37. A 60-year-old man with metastatic renal cell carcinoma is being treated with a checkpoint inhibitor (nivolumab). He develops new onset of severe diarrhea — 8 watery stools per day with abdominal cramping. He has no fever and stool studies are negative for *C. difficile* and other pathogens. Based on the mechanism of this likely complication, what is the most appropriate treatment?

- A. Loperamide 4 mg initially, then 2 mg after each loose stool, with close monitoring
- B. Octreotide 150 mcg subcutaneously three times daily for secretory diarrhea

C. Systemic corticosteroids (prednisone 1 mg/kg/day) for immune-related colitis, with consideration of immunotherapy hold or discontinuation

D. Empiric metronidazole for presumed *C. difficile* infection despite negative testing

38. A 72-year-old woman with advanced dementia (FAST 7C) has been on hospice for eight months. The nursing facility staff report that she has been moaning during care activities and grimacing when repositioned. A PAINAD assessment during morning care yields a score of 7/10. She is currently on no analgesic medications. Following the evidence-based approach for pain management in advanced dementia, which of the following is the most appropriate initial intervention?

A. Order an abdominal CT, hip X-ray, and comprehensive lab panel to identify the specific source of pain before initiating treatment

B. Initiate a scheduled analgesic trial with acetaminophen 650 mg every 6 hours administered via the rectal or crushed oral route, with reassessment of PAINAD scores after 48–72 hours

C. Start morphine 5 mg subcutaneously every 4 hours as initial therapy given the high PAINAD score

D. Consult psychiatry for evaluation of the moaning as a behavioral manifestation of dementia rather than pain

39. A palliative care physician is managing a 59-year-old woman with metastatic ovarian cancer who has developed refractory ascites from peritoneal carcinomatosis. She does not have portal hypertension. An indwelling peritoneal catheter has been placed for home drainage. The patient drains approximately 2 liters every other day. She asks whether she needs to receive albumin infusions after drainage, as she did when she had paracentesis performed at the hospital. Which of the following is the most accurate response?

A. Albumin replacement is required after all large-volume paracentesis regardless of the cause of ascites

B. Albumin replacement is mandatory for every drainage procedure performed through an indwelling catheter

C. Albumin replacement after every drainage would be prohibitively expensive and is not feasible for home-based care

D. Albumin replacement is standard practice for large-volume paracentesis in cirrhotic ascites to prevent post-paracentesis circulatory dysfunction, but it is not routinely required for malignant ascites from peritoneal carcinomatosis

40. A 65-year-old man with advanced pancreatic cancer has severe pain that has been managed with escalating doses of opioids. His current regimen is oral morphine equivalent of 800 mg per day. His pain management specialist recommends rotation to methadone. Before initiating methadone, which of the following potential adverse effects is unique to methadone compared to other opioids and requires specific monitoring?

- A. QTc prolongation with risk of torsades de pointes arrhythmia, requiring ECG monitoring at baseline and periodically during dose titration
- B. Severe constipation that is significantly worse than with other opioids
- C. Irreversible hepatotoxicity that occurs at all dose levels of methadone
- D. Complete absence of respiratory depression, making it the safest opioid for dose escalation

41. A 73-year-old man with end-stage heart failure has been declining on hospice. Over the past 24 hours, his wife reports a dramatic improvement — he is more alert, eating well, talking to family, and requesting to sit in his chair for the first time in two weeks. His vital signs remain abnormal, and his overall clinical trajectory has not changed. This phenomenon is best described as which of the following?

- A. Evidence that his heart failure has responded to treatment and he should be transferred to the hospital for evaluation
- B. A medication interaction causing temporary improvement that will be followed by rapid deterioration
- C. A terminal rally (also called "the rally before death" or "terminal lucidity") — a period of unexpected improvement that may occur hours to days before death, not indicating recovery but rather a transient, poorly understood phenomenon
- D. Recovery from a concurrent infection that was not previously identified

42. A hospice team is caring for a 60-year-old man with advanced gastric cancer. His 10-year-old daughter has been acting out at school — getting into fights, refusing to do homework, and telling her teacher, "My dad is fine. Nothing is wrong." The school counselor has contacted the hospice team. Based on the developmental understanding of grief in school-age children, this behavior is most likely a manifestation of which of the following?

- A. A conduct disorder unrelated to her father's illness requiring disciplinary intervention

- B. Anticipatory grief presenting as behavioral acting out, aggression, and denial — all common grief responses in school-age children who understand the permanence of death but lack mature coping skills
- C. An intellectual disability that prevents her from understanding her father's illness
- D. A manipulative behavior pattern designed to gain attention from adults

43. A 56-year-old woman with advanced non-small cell lung cancer is enrolled in hospice. She tells her hospice physician that she recently learned about an FDA-approved targeted therapy for her specific mutation (EGFR exon 19 deletion) and wants to try it. She is cognitively intact and has an ECOG performance status of 2. Which of the following is the most accurate statement about her options?

- A. Targeted therapy is categorically incompatible with hospice enrollment and she cannot pursue both
- B. She should be encouraged to stay on hospice because all disease-directed therapies are futile in patients with hospice-level prognoses
- C. She cannot access the targeted therapy without first signing a legal document waiving her right to return to hospice
- D. She has the right to revoke her hospice election at any time to pursue disease-directed therapy, and she may re-elect hospice in the future if she chooses

44. A 74-year-old woman with end-stage COPD on hospice has been having increasing dyspnea over the past two days. She is on low-dose morphine for breathlessness. During today's hospice nurse visit, the patient develops acute respiratory distress with oxygen saturation of 75%, respiratory rate of 34, and severe anxiety. She is diaphoretic and using all accessory muscles. Her POLST indicates comfort measures only with no intubation. Which of the following represents the most appropriate immediate intervention?

- A. Administer a morphine bolus (50% increase over her current dose) for dyspnea, plus midazolam 1–2 mg SL for anxiety, position upright, direct a fan to her face, and administer supplemental oxygen
- B. Call 911 for emergency intubation because her oxygen saturation is critically low
- C. Withhold morphine because respiratory depression could worsen her already compromised oxygen level
- D. Advise the patient to practice pursed-lip breathing exercises while waiting for symptoms to resolve spontaneously

45. A 52-year-old man with advanced sarcoma reports increasingly severe pain that is no longer controlled by his opioid regimen. He describes the pain as deep, aching, and localized to the tumor site in his left thigh. Imaging reveals a large, expanding soft tissue mass compressing the femoral nerve. His pain has both somatic (aching, tumor expansion) and neuropathic (burning, shooting into the leg) components. Which of the following analgesic strategies best addresses the mixed nature of his pain?

- A. Increase the opioid dose alone, because opioids treat all types of pain equally
- B. Discontinue the opioid and use gabapentin monotherapy for the neuropathic component
- C. Combine an adequate opioid dose for the somatic component with an adjuvant analgesic (gabapentin or duloxetine) for the neuropathic component, plus consider palliative radiation and/or a nerve block
- D. Use a topical lidocaine patch over the tumor as definitive treatment for both components

46. A 69-year-old woman with metastatic pancreatic cancer has been enrolled in hospice for two months. She asks her hospice physician whether she can continue seeing her gastroenterologist for management of her diabetes, which is unrelated to her cancer. Which of the following is the most accurate answer?

- A. She must use only hospice-affiliated physicians for all medical care while enrolled in hospice
- B. She may continue seeing any physicians for conditions unrelated to her terminal diagnosis, and Medicare will cover those visits separately from the hospice benefit
- C. She must select one physician — either the gastroenterologist or the hospice physician — as her sole provider
- D. All specialist visits require prior authorization from the hospice medical director

47. A 78-year-old man with advanced Alzheimer's disease (FAST 7E) is on hospice in a nursing facility. He has been non-verbal for six months. Over the past two days, staff report that he has become increasingly agitated, pulling at his gown and attempting to climb out of bed. His vital signs are stable. A bladder scan shows 400 mL of retained urine. After catheterization and bladder decompression, his agitation resolves completely within 30 minutes. This case illustrates which of the following clinical principles?

- A. All agitation in patients with advanced dementia is caused by the progression of dementia and requires antipsychotic treatment

- B. Behavioral changes in patients with advanced dementia should be evaluated for reversible medical causes before attributing them to the disease process
- C. Urinary retention is a rare cause of agitation and should be considered only after antipsychotic trial has failed
- D. Reversible causes of agitation should be investigated only in patients who can verbally report their symptoms

48. A 63-year-old woman with metastatic breast cancer has been stable on hospice for four months. She develops a new, painless lump in her left axilla. She asks the hospice nurse whether she should have it evaluated. The lump is likely a new lymph node metastasis. Which of the following is the most appropriate response?

- A. Acknowledge her concern, explain that the lump is likely related to her cancer, and discuss whether further evaluation would change her management or align with her current goals of comfort-focused care
- B. Insist on an immediate biopsy to determine whether the lump is a new primary cancer
- C. Tell her that no diagnostic tests are permitted while she is enrolled in hospice
- D. Refer her to the emergency department for urgent evaluation and possible surgical consultation

49. A 70-year-old man with advanced prostate cancer on hospice has been on a stable dose of opioids for three months. His pain has been well-controlled. He develops new-onset confusion, hallucinations, and myoclonic jerks. His family denies any medication changes. His vital signs are stable except for a blood pressure of 90/60 mmHg. A review of recent events reveals that he has had poor oral intake for five days with minimal fluid consumption due to decreased appetite. The most likely mechanism for his neurotoxicity is which of the following?

- A. Delirium from progression of brain metastases causing structural neurologic damage
- B. Serotonin syndrome from an unreported drug interaction with an herbal supplement
- C. Opioid neurotoxicity from accumulation of active metabolites due to dehydration-related decline in renal function, causing reduced clearance of renally excreted opioid metabolites
- D. Infection-related septic encephalopathy from an occult urinary tract infection

50. A 61-year-old woman with advanced ovarian cancer is on hospice and has been on chronic opioid therapy. Her daughter asks the hospice nurse, "Is my mother going to become addicted to the morphine?" Which of the following responses most accurately addresses the daughter's concern?

- A. "Yes, all patients who take opioids for more than two weeks develop addiction, but the benefits outweigh the risks in serious illness."
- B. "Physical dependence (the body adapting to the medication so that withdrawal occurs if it is stopped abruptly) is expected with chronic opioid use, but addiction (compulsive drug-seeking behavior despite harm) is rare in patients taking opioids for legitimate pain in the setting of serious illness."
- C. "That's not something we worry about in hospice patients because the medications will only be used for a short time."
- D. "Your mother is already addicted, which is why we cannot reduce her dose."

51. A 73-year-old man with end-stage COPD on home hospice develops acute worsening of his dyspnea. His oxygen saturation drops to 80% on his usual 2 L/min nasal cannula. He is tachypneic at 28 breaths per minute. His POLST indicates comfort measures only. The hospice nurse administers a morphine bolus and positions him upright. Despite these interventions, he remains severely dyspneic. What is the most appropriate next pharmacologic intervention?

- A. Increase the supplemental oxygen to 6 L/min by high-flow nasal cannula
- B. Administer nebulized albuterol 2.5 mg for presumed bronchospasm
- C. Initiate a chest X-ray to determine the cause of the acute worsening before any additional treatment
- D. Add midazolam 1–2 mg SC or SL to address the anxiety component of dyspnea that is not responding to opioid alone

52. A 64-year-old woman with metastatic colon cancer is seen in the palliative care clinic. She reports constant, deep, cramping abdominal pain that is poorly localized. She describes it as "squeezing" and points to her entire abdomen with a flat hand rather than a finger. The pain is accompanied by intermittent nausea and diaphoresis. This pain presentation is most consistent with which of the following pain classifications?

- A. Visceral nociceptive pain — poorly localized, deep, cramping, with autonomic features (nausea, diaphoresis), arising from intra-abdominal organs
- B. Somatic nociceptive pain — well-localized and sharp, arising from the abdominal wall muscles

- C. Neuropathic pain — burning and shooting, arising from damaged peripheral nerves
- D. Functional abdominal pain — without an identifiable organic cause

53. A 77-year-old woman with advanced dementia and recurrent urinary tract infections is on hospice. She develops another UTI causing fever, dysuria (evidenced by crying during urination), and new-onset delirium. The hospice nurse calls the physician to discuss whether antibiotics should be administered. The patient's advance directive states "comfort measures only." Which of the following is the most important consideration in this decision?

- A. The advance directive prohibits all medications including antibiotics because they are not comfort measures
- B. The patient's age makes antibiotic treatment futile regardless of the clinical scenario
- C. Whether the antibiotic will relieve distressing symptoms (fever, dysuria, delirium) — if so, treatment is consistent with comfort measures because it directly addresses suffering
- D. Whether the UTI organism is resistant to first-line antibiotics based on culture and sensitivity results

54. A 49-year-old man with ALS has been on noninvasive ventilation (BiPAP) for six months. His FVC has declined to 20% predicted. He is now requiring BiPAP 20 hours per day and is functionally dependent for all ADLs. He communicates via an eye-tracking device. He tells his palliative care team, "I am ready. I want the BiPAP stopped." He has decision-making capacity, and his wife supports his decision. Which of the following statements about this clinical scenario is most accurate?

- A. Withdrawal of BiPAP is ethically distinct from withdrawal of invasive mechanical ventilation and requires additional legal authorization
- B. The patient must first be assessed by a psychiatrist before BiPAP withdrawal can be considered, because requesting treatment withdrawal constitutes evidence of depression
- C. BiPAP cannot be withdrawn because it is not classified as "life-sustaining treatment" under current medical-legal definitions
- D. Withdrawal of BiPAP, like withdrawal of any life-sustaining therapy, is the patient's right when he has decision-making capacity and has made an informed decision

55. A 71-year-old man with metastatic gastric cancer develops new-onset left shoulder pain that has been gradually worsening over the past week. He has no history of shoulder injury or arthritis. Examination of the left shoulder reveals full range of motion, no tenderness to palpation, and no signs of

inflammation. CT scan of the abdomen reveals progressive hepatomegaly with multiple new liver metastases. Which pain mechanism best explains his left shoulder pain?

- A. Occult rotator cuff tear that is not apparent on physical examination
- B. Somatic nociceptive pain from bone metastasis in the left proximal humerus not yet visible on imaging
- C. Neuropathic pain from brachial plexus compression by a new supraclavicular lymph node metastasis
- D. Referred visceral pain from diaphragmatic irritation by the enlarged liver, transmitted via phrenic nerve afferents (C3-C5) to the left shoulder dermatome

56. A hospice nurse is visiting a 66-year-old man with advanced pancreatic cancer at home. She notices that his wife, the primary caregiver, has lost significant weight, has dark circles under her eyes, and is tearful during the visit. When asked how she is doing, the wife says, "I'm fine. I just need to focus on him." The nurse is concerned about caregiver burnout. Which of the following is the most appropriate initial intervention?

- A. Gently express concern about the wife's well-being, normalize the difficulty of caregiving, ask open-ended questions about her own health and coping, and explore whether respite care or additional support services would be helpful
- B. Tell the wife that she needs to see her own doctor immediately because she appears physically ill
- C. Document the observation in the patient's chart without further action because the wife is not the patient
- D. Arrange for the patient to be transferred to an inpatient hospice unit without the wife's knowledge to force her to take a break

57. A 68-year-old woman with end-stage heart failure on hospice has been managed with furosemide for dyspnea from fluid overload. Over the past three days, her dyspnea has worsened. On examination, she has bilateral crackles, JVD, and 3+ pitting edema. Her current furosemide dose is 40 mg daily. Despite being on hospice, which of the following medication adjustments is most appropriate?

- A. Discontinue the furosemide because diuretics are disease-directed therapies inconsistent with hospice
- B. Maintain the current furosemide dose because the hospice benefit does not cover dose adjustments

- C. Increase the furosemide to 80 mg daily (or add metolazone for diuretic synergy) to address the volume overload that is causing her dyspnea, because this medication provides direct symptom relief
- D. Replace the furosemide with morphine as the sole treatment for her dyspnea

58. A 55-year-old man with advanced hepatocellular carcinoma enrolled in hospice develops worsening ascites. The hospice team performs a bedside paracentesis and removes 5 liters of ascitic fluid. Following the procedure, the patient feels significantly better with reduced abdominal distension and improved breathing. His ascites is caused by portal hypertension from cirrhosis. Which of the following post-procedure considerations is most important?

- A. No additional intervention is needed after the paracentesis because the fluid has been removed
- B. Initiation of TPN to replace the protein lost in the ascitic fluid
- C. The patient should be kept NPO for 24 hours after the procedure to prevent nausea
- D. Albumin replacement should be considered for large-volume paracentesis in cirrhotic ascites to prevent post-paracentesis circulatory dysfunction

59. A palliative care physician is caring for a 63-year-old woman with metastatic lung cancer who expresses a desire to discuss her wishes for the end of her life. She has not completed any advance care planning documents. She is cognitively intact and has a prognosis of approximately 6 months. Of the available advance care planning documents, which single document would provide the most flexibility to address unanticipated clinical scenarios?

- A. A living will specifying her preferences for specific medical interventions
- B. A durable power of attorney for health care (DPAHC) naming a well-informed surrogate who understands her values and can respond to any clinical scenario
- C. A POLST form specifying her current treatment preferences as physician orders
- D. A written letter to her family expressing her wishes without legal formality

60. A 78-year-old man with advanced Parkinson's disease and Lewy body dementia has been experiencing progressive cognitive decline. He now has visual hallucinations that are distressing to him and his family. The hallucinations are not related to medications (his carbidopa-levodopa dose has been stable). His primary team starts haloperidol 1 mg at bedtime. Over the next 48 hours, he develops severe rigidity, inability to swallow, and a fever of 39.5°C. This presentation is most consistent with which of the following?

- A. Severe reaction to haloperidol in a patient with Lewy body dementia — dopamine blockade in these patients can cause severe parkinsonism, neuroleptic malignant syndrome, and is potentially life-threatening
- B. Progression of his underlying Parkinson's disease unrelated to the new medication
- C. A new stroke causing acute motor deficits that coincidentally occurred after starting haloperidol
- D. Serotonin syndrome caused by an interaction between haloperidol and carbidopa-levodopa

61. A 54-year-old woman with metastatic breast cancer has been on stable opioid therapy for four months. She reports new severe left hip pain that began three days ago and is worsening. She is currently taking oxycodone CR 40 mg every 12 hours with oxycodone IR 10 mg every 4 hours as needed (using 3 breakthrough doses per day). Imaging reveals a new lytic metastasis in the left acetabulum. Her total 24-hour oxycodone dose is 110 mg. After optimizing her opioid dose, the palliative care physician also wants to add a non-opioid agent specifically targeted at her bone pain. Which of the following is the most appropriate addition?

- A. Gabapentin 300 mg three times daily for neuropathic bone pain modulation
- B. Duloxetine 60 mg daily for dual analgesic and antidepressant effect
- C. An NSAID (celecoxib 200 mg daily or ibuprofen 600 mg three times daily) for its specific efficacy against prostaglandin-mediated bone pain
- D. Topical capsaicin 0.075% cream applied to the left hip for peripheral nerve desensitization

62. A 67-year-old man with advanced cholangiocarcinoma and complete biliary obstruction develops severe generalized pruritus that has been refractory to cholestyramine and rifampin. He now reports that the pruritus is worse than his cancer pain and is the primary factor reducing his quality of life. The palliative care physician considers a trial of low-dose naltrexone. Which pharmacologic mechanism explains naltrexone's efficacy in cholestatic pruritus?

- A. Naltrexone acts as a topical anesthetic that numbs peripheral itch receptors in the skin
- B. Naltrexone blocks histamine receptors in the skin, reducing the inflammatory component of pruritus
- C. Naltrexone is an anticonvulsant that reduces neuronal firing in the pruritogenic pathways of the spinal cord
- D. Naltrexone is an opioid antagonist that blocks central mu-opioid receptor-mediated pruritus — elevated endogenous opioid tone in cholestasis contributes to pruritus through central mechanisms

63. A hospice team is conducting a bereavement follow-up visit with the 48-year-old widow of a patient who died three months ago. The widow reports that she has been unable to return to work, cannot stop thinking about her husband's last hours, avoids driving past the hospice facility, and has nightmares about the death event. She was present when her husband died after a prolonged period of terminal agitation that she describes as "traumatic." Her symptoms are most consistent with which of the following?

- A. Normal grief that will resolve naturally with time and social support alone
- B. Post-traumatic stress disorder (PTSD) or acute stress response related to the traumatic experience of witnessing her husband's difficult death
- C. Prolonged grief disorder requiring specialized complicated grief treatment
- D. Major depressive disorder unrelated to the bereavement experience

64. A palliative care consultation is requested for a 72-year-old man in the surgical ICU who underwent emergent colectomy for a perforated colon cancer. He developed postoperative sepsis and multi-organ failure. He is on mechanical ventilation, vasopressors, and continuous renal replacement therapy. He has no advance directive and his two adult children disagree about treatment — his son wants "everything done" and his daughter wants comfort care. Neither child has been designated as health care proxy. Under the standard legal hierarchy for surrogate decision-making, which of the following is the most appropriate approach to resolving this disagreement?

- A. The son's preference for aggressive treatment automatically takes precedence because male relatives have higher standing in the surrogate hierarchy
- B. The medical team should make the decision unilaterally based on clinical judgment without family input
- C. Because neither child has been designated as health care proxy, there is no clear legal hierarchy between equally ranked surrogates — the team should facilitate communication, seek consensus, and consider ethics committee consultation if agreement cannot be reached
- D. The court must be petitioned to appoint a guardian before any treatment decisions can be made

65. A 60-year-old woman with stage IV pancreatic cancer is seen for a palliative care consultation. She tells the physician, "I read that cannabis oil can cure cancer. Should I stop my chemo and just use cannabis?" Which of the following responses best balances respect for the patient's autonomy with clinical responsibility?

- A. "Cannabis has no medical uses and you should not waste your time with it."
- B. "If that's what you believe, you should follow your instincts and stop chemotherapy."
- C. "I appreciate you bringing this up. While cannabis may help with some symptoms like nausea and appetite, there is currently no evidence that it cures cancer. I would recommend continuing the treatments your oncologist has prescribed while we work together to manage your symptoms. Would you like to discuss using cannabis for symptom management alongside your other treatments?"
- D. "I can't discuss cannabis because it is a controlled substance and I could lose my license."

66. A 79-year-old woman with end-stage heart failure on hospice has been declining over the past week. She is now bedbound, intermittently confused, and eating only ice chips. Her family is at the bedside. The hospice nurse notes that the patient's breathing has developed a pattern of gradually deepening and then shallowing respirations with periods of apnea lasting 15–20 seconds, followed by resumption of the cycle. The family is alarmed by the pauses. Which of the following statements by the nurse best educates the family about this breathing pattern?

- A. "The pauses mean she is having difficulty breathing and we should increase her oxygen immediately."
- B. "This pattern indicates a seizure and we need to administer anticonvulsant medication."
- C. "The breathing pattern suggests pneumonia and we should start antibiotics right away."
- D. "What you're seeing is called Cheyne-Stokes breathing — a pattern of deep breaths followed by pauses that is a normal part of the dying process. It does not mean she is suffocating or in distress. We will continue to monitor her comfort closely."

67. A 58-year-old man with advanced esophageal cancer has complete dysphagia and requires all medications via non-oral routes. He is currently receiving morphine via continuous subcutaneous infusion at 4 mg/hour (96 mg/24 hours SC). His pain is well-controlled, but he is developing significant sedation and mild confusion. His renal function is normal. The palliative care team considers rotating to subcutaneous hydromorphone to potentially reduce sedation while maintaining analgesia. Using the equianalgesic table, which of the following represents the correct calculation with a 25% cross-tolerance reduction?

- A. $96 \text{ mg SC morphine} \div 10 = 9.6 \text{ mg}$, then $\times 1.5 = 14.4 \text{ mg SC hydromorphone}$, then $\times 0.75 = 10.8 \text{ mg SC hydromorphone per 24 hours}$
- B. Step 1: $\text{SC morphine } 96 \text{ mg}/24\text{h} = \text{SC morphine } 96 \text{ mg}/24\text{h}$ (no route conversion needed — already parenteral). Step 2: Convert using equianalgesic ratio morphine 10 mg parenteral = hydromorphone 1.5 mg parenteral: $96/10 \times 1.5 = 14.4 \text{ mg}$. Step 3: Apply 25% reduction: $14.4 \times 0.75 = 10.8 \text{ mg SC hydromorphone per 24 hours}$

C. $96 \text{ mg SC morphine} \times 3 = 288 \text{ mg oral morphine equivalent}$, then convert to oral hydromorphone $7.5 \text{ mg} = 30 \text{ mg morphine}$

D. $96 \text{ mg SC morphine} = 96 \text{ mg SC hydromorphone}$ because the two drugs are equipotent by the parenteral route

68. A 74-year-old man with advanced COPD on hospice at home develops a temperature of 38.9°C , productive cough with purulent sputum, and increased dyspnea. His baseline dyspnea is well-managed with morphine. His goals are comfort-focused. In deciding whether to treat with antibiotics, which of the following clinical factors is most important?

A. Whether the pneumonia is causing symptoms (fever, cough, worsening dyspnea) that antibiotics could relieve, balanced against his prognosis, goals of care, and the burden of treatment

B. Whether a sputum culture can identify the specific organism before treatment is initiated

C. Whether the antibiotics are available in IV formulation, because oral antibiotics are ineffective for pneumonia

D. Whether his chest X-ray shows a focal infiltrate, because antibiotics should never be prescribed without radiographic confirmation

69. A 63-year-old woman with stage IV breast cancer has been declining. During a family meeting, her husband states, "I know she's getting worse, but she told me years ago that she never wanted to give up. She would want us to keep fighting." The patient's adult daughter says, "Mom changed after the last hospitalization. She told me she didn't want any more aggressive treatment." There is no written advance directive. Which decision-making standard should the team use, and whose testimony is more likely to reflect the patient's current values?

A. The best interest standard should be used because conflicting family reports make substituted judgment impossible

B. The physician should make the decision independently because family disagreement invalidates surrogate authority

C. The substituted judgment standard should be used, with priority given to the most recent expression of the patient's values — the daughter's account of a more recent conversation may better reflect the patient's evolved preferences as her illness progressed

D. The husband's testimony automatically takes precedence because spouses have the highest legal standing in surrogate hierarchy

70. A 56-year-old woman with stage IV non-small cell lung cancer is enrolled in hospice. She has an EGFR mutation-positive tumor. She learns about a new FDA-approved targeted therapy for her specific mutation. She wants to try the medication but does not want to leave hospice. The hospice physician explains her options. Under the current Medicare hospice benefit structure, which of the following statements is most accurate?

- A. Some hospice programs may agree to provide the targeted therapy if they determine it is primarily for symptom management rather than curative intent
- B. The patient can receive the targeted therapy and remain on hospice simultaneously without any restrictions
- C. The patient must permanently revoke hospice with no possibility of re-enrollment to access the targeted therapy
- D. The hospice benefit always covers all cancer therapies including targeted agents as part of the per diem

71. A palliative care physician is completing advance care planning with a 65-year-old woman with newly diagnosed stage IV ovarian cancer. The patient names her sister as her durable power of attorney for health care. The physician emphasizes that naming the surrogate is only the first step. What is the single most important additional step to ensure the DPAHC is effective?

- A. Having the DPAHC form notarized by an attorney to ensure legal validity
- B. The patient must have a detailed conversation with her sister about her values, goals, fears, and specific treatment preferences so the sister can make informed decisions as her surrogate
- C. Filing the DPAHC with the county courthouse for official registration
- D. Having the sister complete a medical terminology course to prepare for clinical decision-making

72. A 70-year-old man with metastatic lung cancer has a painful metastasis in his right femoral neck. He is ambulatory with a walker and has an ECOG performance status of 2. His expected survival is 4–6 months. Imaging reveals a lytic lesion with 60% cortical destruction. His orthopedic oncologist recommends prophylactic surgical fixation. Which of the following is the primary rationale for this recommendation?

- A. Prophylactic fixation prevents a pathologic fracture that would cause severe pain, immobility, and potentially life-threatening complications in a patient with adequate performance status and meaningful expected survival
- B. Surgical fixation will cure the bone metastasis and improve his cancer prognosis
- C. Prophylactic fixation is required before palliative radiation can be administered to the site
- D. All bone metastases require surgical fixation regardless of fracture risk

73. A hospice nurse is conducting a home visit for a 72-year-old woman with end-stage COPD. The patient's husband asks about the hospice volunteer program. He is particularly interested in whether a volunteer could stay with his wife for a few hours each week so he can attend his own medical appointments. Which of the following statements about the Medicare hospice volunteer requirement is most accurate?

- A. Volunteers are optional in hospice programs and are provided only by large, well-funded organizations
- B. Medicare does not regulate hospice volunteer programs in any way
- C. Medicare requires hospice programs to use volunteers to provide a minimum of 5% of total patient care hours, and companionship/respice for caregivers is among the most common volunteer services
- D. Volunteers may only provide administrative support and are prohibited from any patient-facing roles

74. A 59-year-old man with advanced gastric cancer develops acute upper GI bleeding with hematemesis. He is on hospice with comfort measures only and a DNR order. He is alert and appears frightened. Estimated blood loss is approximately 300 mL so far. The bleeding appears to be slowing. Unlike the catastrophic hemorrhage scenario, this bleeding is not immediately life-threatening. Which of the following is the most appropriate initial management approach?

- A. Call 911 for emergency endoscopy and blood transfusion
- B. Administer midazolam 10 mg IM for immediate deep sedation
- C. Withhold all interventions and observe because the patient is on comfort measures
- D. Provide anxiolysis with low-dose lorazepam, manage any discomfort with opioids, consider a proton pump inhibitor and/or sucralfate for mucosal protection, and monitor the bleeding while communicating with the patient and family about the situation

75. A 68-year-old man with end-stage renal disease who discontinued dialysis one week ago is now obtunded. His wife is at the bedside. She notices that his arms and hands have been jerking intermittently. She asks whether he is having seizures. The palliative care team explains that these movements are most likely which of the following?

- A. Focal seizures from uremic encephalopathy requiring immediate anticonvulsant loading
- B. Myoclonus from uremic encephalopathy, which is a common neurologic manifestation of renal failure distinct from seizures and typically managed with clonazepam or lorazepam rather than anticonvulsants
- C. Voluntary purposeful movements indicating that the patient is regaining consciousness
- D. Agonal movements indicating imminent death within minutes

76. A 75-year-old woman with advanced heart failure is actively dying. Her family is at the bedside. The hospice nurse notes that the patient's feet and lower legs have developed purple-blue mottling that has been progressively extending toward the knees over the past 6 hours. The patient is unresponsive, and her radial pulse is no longer palpable. These findings indicate which of the following?

- A. Progressive cardiovascular failure with peripheral vasoconstriction and centralization of blood flow — mottling extending above the knees with loss of peripheral pulses is one of the most reliable indicators that death is likely within hours
- B. A deep vein thrombosis requiring anticoagulation therapy
- C. A severe allergic reaction to one of her current medications
- D. Dependent edema from immobility that can be corrected with leg elevation

77. A palliative care physician is caring for a 63-year-old man with advanced non-small cell lung cancer and a new malignant pleural effusion causing moderate dyspnea. He has undergone three thoracenteses in the past month with rapid reaccumulation. His ECOG performance status is 2 and his expected survival is approximately 4 months. Which of the following is the most appropriate long-term management strategy for his recurrent pleural effusion?

- A. Continue serial thoracenteses every 7–10 days for the remainder of his life
- B. Initiate high-dose diuretic therapy with furosemide 80 mg daily to prevent reaccumulation

C. Place an indwelling pleural catheter (IPC) for intermittent home drainage, which reduces procedure burden and allows home management

D. Perform surgical pleurectomy via thoracotomy as definitive treatment

78. A 58-year-old man with metastatic melanoma on the immunotherapy agent ipilimumab presents with acute onset of fatigue, hypotension, nausea, and hypoglycemia. His morning cortisol level is undetectable. These findings are most consistent with which immunotherapy-related adverse event?

A. Immune-related hepatitis causing liver failure and impaired glucose metabolism

B. Immune-related adrenal insufficiency from pituitary inflammation

C. Immune-related colitis causing severe dehydration and metabolic derangement

D. Immune-related hypophysitis causing secondary adrenal insufficiency, requiring urgent corticosteroid replacement

79. A 70-year-old man with end-stage liver disease on hospice has worsening hepatic encephalopathy despite lactulose therapy. His wife asks whether rifaximin could be added to help with his confusion. The hospice team considers the request. Which of the following principles should guide this medication decision?

A. Rifaximin is a disease-directed therapy and cannot be provided under the hospice benefit under any circumstances

B. If rifaximin would reduce the patient's confusion and agitation (symptom relief), it is consistent with comfort-focused goals and may be covered under the hospice per diem as a medication related to the terminal diagnosis

C. Rifaximin requires a prior authorization from Medicare that takes 30 days to process

D. Rifaximin can only be prescribed by a hepatologist, not by a hospice physician

80. A 72-year-old woman with metastatic ovarian cancer develops tense ascites requiring drainage. She has an indwelling peritoneal catheter. During a home drainage session, her husband drains 3 liters over 30 minutes. Shortly after, the patient becomes lightheaded, nauseated, and develops a blood pressure of 85/50 mmHg. What is the most likely cause of her hemodynamic instability, and what is the most important counseling point to prevent recurrence?

- A. She has developed an intra-abdominal hemorrhage from catheter erosion into a blood vessel, requiring emergency surgical intervention
- B. Rapid large-volume drainage caused a vasovagal response and intravascular volume shift — future drainages should be performed more slowly (over 60–90 minutes rather than 30 minutes) with the patient in a reclined position
- C. The ascitic fluid was infected, and the drainage has released bacteria into the bloodstream causing septic shock
- D. She has developed a tension pneumoperitoneum from air entering the abdomen through the catheter

81. A 66-year-old man with advanced pancreatic cancer has been on high-dose opioid therapy (oral morphine equivalent 500 mg/day) with persistent pain. His pain management specialist recommends adding ketamine. Which pharmacologic property of ketamine makes it particularly useful in opioid-refractory pain?

- A. Ketamine is a potent mu-opioid receptor agonist that provides additive analgesia to the existing opioid regimen
- B. Ketamine is a COX-2 inhibitor with anti-inflammatory properties superior to NSAIDs
- C. Ketamine is an NMDA receptor antagonist that modulates central sensitization and may reverse opioid-induced hyperalgesia
- D. Ketamine is a sodium channel blocker that provides targeted relief for neuropathic pain identical to gabapentin

82. A 55-year-old woman with advanced sarcoma tells her palliative care physician, "I've made my peace with dying. But I need to know — when the time comes, will it hurt? Will I be able to breathe? I'm not afraid of being dead — I'm afraid of the dying part." Which of the following responses best addresses her specific concerns using appropriate communication principles?

- A. "Let me explain the pathophysiology of the dying process so you understand exactly what will happen to each organ system."
- B. "Don't worry about that right now. Let's focus on today and deal with that when it comes."
- C. "Many patients have less physical discomfort during the dying process than they expect, and we have very effective medications to manage pain, breathlessness, and anxiety if they occur. Our promise to you is that we will be with you through this and will keep you comfortable. Can you tell me more specifically about what worries you most?"

D. "I can assure you that you will feel absolutely nothing when the time comes."

83. A hospice program is reviewing its compliance with Medicare Conditions of Participation. The quality improvement team identifies that the program has been billing for continuous home care (CHC) for several patients. Upon review, the documentation for one patient shows that a certified nursing assistant provided 10 hours of personal care in the patient's home during a symptom crisis. No registered nurse was present during any of the 10 hours. This billing is which of the following?

A. Appropriate because any hospice team member can provide the care required for CHC billing

B. Inappropriate because CHC requires a minimum of 8 hours of predominantly nursing care — CNA hours alone do not meet the requirement for CHC billing, which must be predominantly skilled nursing (RN or LPN) care

C. Appropriate because the total hours exceeded the 8-hour minimum required for CHC

D. Inappropriate only because the total hours should have been 12 rather than 10

84. A 76-year-old woman with advanced Alzheimer's disease (FAST 7E) on hospice develops a fever of 39.5°C. Her family has previously decided on comfort measures only with no hospital transfers. The hospice nurse obtains a urinalysis showing pyuria and bacteriuria consistent with a UTI. Before initiating antibiotics, the nurse calls the physician. The physician's decision to treat or not treat should be guided primarily by which of the following?

A. Whether the UTI symptoms (fever, possibly dysuria as evidenced by distress during urination, possible delirium) are causing distress that antibiotics could relieve, weighed against the patient's overall trajectory, goals of care, and the understanding that recurrent UTIs are a feature of the underlying disease process

B. The specific organism identified on urine culture, because only certain organisms warrant treatment

C. Whether the patient's family wants antibiotics, regardless of the clinical assessment

D. The patient's white blood cell count, because treatment is only indicated if the WBC exceeds 15,000

85. A palliative care physician is managing a 62-year-old woman with metastatic breast cancer who is experiencing refractory bone pain despite high-dose opioids, NSAIDs, and palliative radiation to the most painful sites. Her pain management specialist recommends a trial of denosumab. Which of the following statements about denosumab's mechanism and expected benefit is most accurate?

- A. Denosumab directly inhibits tumor growth by blocking cancer cell proliferation at the bone metastasis site
- B. Denosumab provides immediate analgesic effect within hours of administration, similar to opioids
- C. Denosumab inhibits osteoclast-mediated bone resorption by blocking RANKL, reducing skeletal-related events and potentially reducing bone pain over a period of weeks
- D. Denosumab reverses osteoporosis and rebuilds bone destroyed by metastatic disease

86. A 70-year-old man with end-stage heart failure is actively dying at home on hospice. His wife, who has been his primary caregiver for two years, asks the hospice nurse, "After he dies, will you still be available? I don't know how I'll manage." Which of the following most accurately describes the hospice program's bereavement obligations?

- A. Hospice bereavement services are available only on the day of death and cannot extend beyond the funeral
- B. The hospice social worker will conduct a single follow-up call at 30 days post-death
- C. Bereavement support is not included in the Medicare hospice benefit and must be arranged privately
- D. Medicare requires hospice programs to provide bereavement support for at least 13 months after the patient's death, typically including periodic contacts, memorial events, support groups, and referrals for grief counseling when indicated

87. A 64-year-old man with metastatic colon cancer is on the palliative care service. His wife approaches the physician and says, "Doctor, please don't tell my husband that his cancer has spread. In our family, we believe that knowing the truth will make him give up and die faster. We want to protect him." The patient has not yet been informed of the new metastases. Which of the following is the most appropriate initial response?

- A. Inform the wife that you are legally required to disclose all medical information to the patient and proceed immediately to inform him
- B. Ask the patient directly — in a separate conversation from the wife — how much information about his illness he would like to receive, respecting his autonomy to determine his own information preferences
- C. Agree to the wife's request and withhold the information from the patient indefinitely
- D. Tell the wife that her cultural beliefs are inappropriate and that all patients must be told the truth regardless of cultural context

88. A 48-year-old woman with advanced cervical cancer enrolled in hospice develops new bilateral hydronephrosis from retroperitoneal tumor progression. Her creatinine has risen from 1.0 to 4.2 mg/dL over 10 days. She is becoming increasingly confused and nauseated. Her hospice physician discusses with her and her family whether to pursue nephrostomy tube placement. Which of the following is the most important factor in this decision?

- A. The technical feasibility of nephrostomy tube placement as determined by interventional radiology
- B. Whether her insurance will cover the procedure while she is enrolled in hospice
- C. The patient's values, goals, and understanding of what nephrostomy placement would and would not accomplish — specifically, that it would extend her life but would not treat her cancer, and she would live with nephrostomy tubes for whatever time remains
- D. Whether her creatinine has exceeded a specific threshold that mandates intervention

89. A 71-year-old man with advanced prostate cancer and diffuse bone metastases has been on opioid therapy with adequate pain control. He develops new-onset hypercalcemia (corrected calcium 14.8 mg/dL) with confusion, severe constipation, and polyuria. His family initially attributed these symptoms to disease progression. The treatment team considers whether to treat the hypercalcemia. Which of the following statements best summarizes the key decision-making factors?

- A. Hypercalcemia should never be treated in hospice patients because it represents a natural dying process
- B. All hypercalcemia must be treated aggressively regardless of the patient's goals or prognosis
- C. The decision depends on the patient's goals: if he wants symptom relief, treating the hypercalcemia (which is causing his confusion, constipation, and polyuria) may significantly improve his comfort and function; if his goals are comfort-only and treatment would merely prolong dying, supportive symptom management alone may be more appropriate
- D. Hypercalcemia treatment is contraindicated in patients already receiving opioids due to drug interactions

90. A 66-year-old woman with end-stage COPD is actively dying at home on hospice. Her respiratory secretions have produced loud, gurgling breathing (death rattle) that began three hours ago. The hospice nurse administered glycopyrrolate 0.2 mg SC at that time. The secretion noise has not significantly improved. What is the most important counseling point for the family regarding this symptom?

- A. The continued noise means the glycopyrrolate has failed and more aggressive suctioning is needed immediately
- B. The family should be reassured that the death rattle is typically more distressing to the family than to the patient, who is usually unaware of the sound, and that anticholinergics prevent new secretion production but do not dry existing accumulated secretions
- C. The noise indicates aspiration pneumonia that requires antibiotic treatment
- D. The family should not be present in the room because the sound will be traumatic and could cause lasting psychological harm

91. A 73-year-old woman with stage IV lung cancer has a POLST indicating comfort measures only, no intubation, and no CPR. She is admitted to the hospital for a fall with a hip fracture. The surgical team recommends hip repair to relieve pain and restore mobility. Her POLST does not address surgical procedures. Which of the following is the most appropriate course of action?

- A. Proceed with the hip repair because the POLST does not specifically prohibit surgery, and the procedure serves a comfort-focused goal (pain relief and restored mobility) consistent with her overall care plan
- B. Refuse the surgery because the POLST indicates comfort measures only, which excludes all surgical procedures
- C. Obtain a court order to override the POLST before proceeding with surgery
- D. Discharge the patient from the hospital without treatment because she has a terminal diagnosis

92. A 60-year-old man with advanced hepatocellular carcinoma on hospice develops severe pruritus from cholestasis. He has tried cholestyramine (intolerable side effects), rifampin (no improvement after two weeks), and sertraline (modest improvement but insufficient). The palliative care physician is considering naltrexone 12.5 mg daily. Before starting naltrexone, which of the following is the most important clinical consideration?

- A. Naltrexone has no significant drug interactions and can be started without precautions
- B. Naltrexone is an opioid antagonist and may precipitate acute opioid withdrawal in this patient, who is taking morphine for pain — the morphine must be stopped or naltrexone must be started at a very low dose with careful titration
- C. Naltrexone causes irreversible hepatotoxicity and is contraindicated in patients with liver disease
- D. Naltrexone requires IV administration and cannot be given in the home setting

93. A 77-year-old man with advanced heart failure and a biventricular ICD/pacemaker is enrolled in hospice. The hospice physician discusses ICD deactivation. The patient agrees to deactivate the shock function but wants to keep the pacing function active. Which of the following statements about this request is most accurate?

- A. The ICD shock function and pacing function cannot be separated — deactivating shocks automatically disables pacing
- B. The shock function must be removed surgically to prevent future inadvertent reactivation
- C. Keeping the pacing function is not permitted under hospice because pacemakers are life-sustaining devices
- D. The shock function and pacing function can be independently programmed — deactivating shocks while maintaining pacing is a standard and commonly performed approach that respects the patient's specific wishes

94. A 53-year-old woman with metastatic ovarian cancer has been on hospice for one month. She has been experiencing worsening fatigue, poor appetite, and a feeling of general malaise. Her hemoglobin is 7.2 g/dL (down from 9.8 g/dL one month ago). She is symptomatic with dyspnea on minimal exertion and lightheadedness. She asks whether a blood transfusion would help. Which of the following is the most appropriate clinical response?

- A. Blood transfusions are categorically excluded under the hospice benefit
- B. Advise against transfusion because any blood product use is inconsistent with comfort-focused care
- C. A blood transfusion may provide temporary symptomatic relief of her dyspnea and fatigue and can be considered consistent with comfort-focused goals — the decision should weigh the expected symptom benefit against the burden of the transfusion procedure and its temporary nature
- D. The patient must revoke hospice before she can receive a blood transfusion

95. A 69-year-old man with end-stage liver disease is on hospice. He has been taking lactulose for hepatic encephalopathy and morphine for abdominal pain. His hospice aide reports that during her last two visits, the patient's wife has been giving him medications from an unmarked bottle. When the aide asked about it, the wife became evasive. The hospice nurse visits and discovers the unmarked bottle contains oxycodone that belongs to a neighbor. What is the most appropriate course of action?

- A. Report the findings to the physician, secure the medications, assess whether the patient's pain management needs are being met (he may be undertreated, prompting his wife to seek additional opioids), and develop a comprehensive plan that addresses both the medication safety concern and any unmet symptom management needs
- B. Immediately discharge the patient from hospice for medication diversion
- C. Confiscate the oxycodone and report the wife to law enforcement without further investigation
- D. Ignore the situation because the wife is simply trying to help her husband

96. A palliative care physician is caring for a 58-year-old man with ALS who is ventilator-dependent via tracheostomy. He communicates via eye-tracking technology. He has been on the ventilator for two years. Over the past month, he has consistently expressed the wish to have the ventilator withdrawn. He has decision-making capacity. His wife agrees with his decision. The physician is personally uncomfortable with ventilator withdrawal because she feels it is equivalent to causing the patient's death. Which of the following best describes the physician's ethical obligations?

- A. The physician may refuse to participate in the withdrawal and may transfer the patient's care to another physician who is willing to perform the withdrawal, but may not abandon the patient or obstruct his access to care
- B. The physician must perform the withdrawal regardless of her personal moral objections because patient autonomy is absolute
- C. The physician's moral discomfort with the procedure legally prohibits the withdrawal from occurring at all
- D. The physician should petition the ethics committee to override the patient's decision because ventilator withdrawal is ethically impermissible

97. A 74-year-old man with metastatic lung cancer has been on hospice for three months. His condition has been declining gradually. During a routine visit, the hospice physician notes that his ECOG performance status has worsened from 3 to 4, his oral intake has decreased to sips of liquid, and he has lost an additional 5 pounds since the last visit. His PPS score is 20%. Based on the PPS framework, a score of 20% indicates which of the following expected prognostic timeframe?

- A. Months of survival with potential for functional improvement
- B. Weeks to months with a slowly declining trajectory
- C. The PPS score is not a prognostic tool and cannot be used to estimate survival
- D. Days to weeks, indicating that death may be approaching within a short timeframe

98. A 62-year-old woman with end-stage COPD on hospice has severe dyspnea despite morphine 10 mg PO every 4 hours. Her oxygen saturation is 91% on room air. She asks whether supplemental oxygen would help her breathe more comfortably. Based on the evidence regarding oxygen therapy in palliative care, which of the following is the most accurate response?

- A. Supplemental oxygen provides definitive relief for dyspnea in all patients with serious illness regardless of oxygen saturation
- B. Oxygen must be administered at 4 L/min or higher to provide any benefit for dyspnea
- C. Evidence suggests that supplemental oxygen does not provide additional dyspnea relief over room air in non-hypoxemic patients — at her saturation of 91%, a fan directed at the face may be equally effective and is the recommended first approach
- D. Supplemental oxygen is contraindicated in patients with COPD because it suppresses their hypoxic respiratory drive

99. A 70-year-old man with advanced prostate cancer is admitted with new-onset altered mental status, back pain, and bilateral leg weakness. MRI reveals epidural spinal cord compression at T10. He is given dexamethasone 10 mg IV stat. MRI also reveals three additional sites of epidural disease at T4, L2, and L4 without cord compression. This finding of multi-level disease changes the treatment approach in which of the following ways?

- A. Multi-level epidural disease favors radiation therapy over surgery because surgery addresses only a single level, while radiation can treat the entire involved spine segment
- B. Multi-level disease has no impact on the treatment approach — the same management is used regardless of the number of levels involved
- C. Multi-level disease makes all treatment futile, and the patient should be transitioned immediately to comfort measures without radiation or surgery
- D. Multi-level disease requires surgical decompression at all four levels simultaneously

100. A 56-year-old man with advanced gastric cancer is being treated with palliative chemotherapy. He develops severe mucositis with oral pain, inability to eat, and visible ulcerations on the buccal mucosa and tongue. Which of the following best describes the most appropriate management approach for his mucositis?

- A. Systemic antibiotics to prevent secondary infection of the oral ulcerations

- B. A comprehensive approach including meticulous oral hygiene, bland rinses (salt and baking soda), topical analgesics (viscous lidocaine), systemic analgesics for severe pain, and assessment of nutritional status with support as needed
- C. Discontinuation of all chemotherapy permanently because mucositis indicates intolerable toxicity
- D. Application of hydrogen peroxide rinses to sterilize the oral cavity and promote healing

101. A 73-year-old man with metastatic lung cancer has been managing well on hospice. He develops sudden onset of severe right-sided chest pain, dyspnea, and decreased breath sounds on the right. A clinical diagnosis of pneumothorax is suspected. He is on comfort measures only. Which of the following is the most appropriate management?

- A. No intervention is indicated because the patient is on comfort measures and all complications should be allowed to progress naturally
- B. Call 911 for emergency chest tube placement in the emergency department
- C. Arrange for urgent CT scan to confirm the diagnosis before any treatment is considered
- D. If the pneumothorax is causing significant dyspnea and distress, needle decompression or small-bore chest tube placement may be appropriate as a symptom-relieving intervention consistent with comfort goals, followed by opioids and anxiolytics for symptom management

102. A 68-year-old woman with end-stage heart failure on hospice has been declining over the past week. She is now unresponsive and has Cheyne-Stokes breathing. Her husband asks the hospice nurse, "Can she still hear me?" Based on what is known about the dying process, which of the following is the most accurate and helpful response?

- A. "No — once a patient is unresponsive, all sensory function has ceased and she cannot hear anything."
- B. "We don't know for certain, but there is reason to believe that hearing may be preserved even when a person appears unresponsive. I encourage you to talk to her, hold her hand, and say whatever you need to say."
- C. "She can definitely hear everything you say, so be very careful about what you discuss in the room."
- D. "Her hearing has been replaced by visual hallucinations, so speaking to her will cause confusion."

103. A palliative care physician is meeting with a 71-year-old man who has just been diagnosed with metastatic pancreatic cancer. She has delivered the diagnosis using the SPIKES protocol and has

responded to his initial emotional reaction. He is now ready to discuss next steps. She says, "Based on what you've told me about what's most important to you — staying at home and being comfortable — I would recommend focusing on managing your symptoms with palliative care rather than pursuing aggressive chemotherapy, which is unlikely to help and would likely mean more time in the hospital." This statement represents which element of effective goals-of-care communication?

- A. Making a recommendation that integrates the patient's stated values with the medical reality — a core component of shared decision-making
- B. Paternalistic decision-making that removes the patient's autonomy
- C. An inappropriate disclosure of prognosis that will destroy the patient's hope
- D. A premature recommendation made before adequate exploration of the patient's values

104. A 60-year-old woman with metastatic breast cancer on hospice develops a pathologic fracture of the left proximal humerus after reaching for an item on a high shelf. She has severe pain and cannot move her left arm. Her ECOG performance status before the fracture was 2, and her expected survival is approximately 3 months. Which of the following is the most appropriate management approach?

- A. Conservative management with a sling, increased opioids, and ice application as definitive treatment
- B. Surgical fixation (intramedullary nailing or plate fixation) to relieve pain and restore arm function, followed by palliative radiation to the fracture site
- C. Amputation of the left arm to eliminate the pain source
- D. Palliative radiation to the fracture site as the sole intervention

105. A 75-year-old man with advanced COPD and end-stage heart failure is on hospice. His wife calls the hospice nurse and reports that he has not had a bowel movement in six days. He is taking morphine for dyspnea, along with senna 2 tablets at bedtime and docusate 100 mg twice daily. He reports abdominal bloating and discomfort. A rectal examination reveals hard stool in the vault. After addressing the acute impaction, which of the following long-term changes to his bowel regimen is most important?

- A. Replace senna with psyllium fiber supplementation and increased fluid intake
- B. Discontinue the morphine to eliminate the cause of constipation
- C. Continue the current laxative regimen unchanged because constipation is expected with opioids

D. Escalate the laxative regimen — increase senna to 4 tablets twice daily, add polyethylene glycol 17 g daily, and emphasize that prophylactic laxatives must be taken consistently and titrated proportionally with opioid doses because tolerance to constipation does not develop

106. A 62-year-old woman with metastatic ovarian cancer is on hospice. She has refractory nausea that has been partially responsive to haloperidol and ondansetron. Her nausea worsens significantly with position changes and when she rolls in bed. Based on the mechanism most likely responsible for this pattern, which antiemetic class is most appropriately added?

A. A prokinetic agent (metoclopramide) for gastroparesis-mediated nausea

B. A corticosteroid (dexamethasone) for ICP-mediated nausea

C. An antihistamine or anticholinergic (meclizine or scopolamine) for vestibular-mediated nausea triggered by movement and position change

D. A serotonin antagonist (granisetron) for chemotherapy-associated delayed nausea

107. A 55-year-old man with advanced melanoma develops new-onset thyroid dysfunction while on pembrolizumab. His TSH is elevated at 45 mIU/L and free T4 is low. He has new fatigue, constipation, and cold intolerance. This presentation is most consistent with which of the following?

A. Immune-related thyroiditis progressing to hypothyroidism, which is managed with thyroid hormone replacement and does not necessarily require discontinuation of immunotherapy

B. Progression of melanoma to the thyroid gland requiring surgical resection

C. A paraneoplastic syndrome causing thyroid stimulation

D. Normal aging-related thyroid decline unrelated to immunotherapy

108. A 74-year-old man with end-stage heart failure on hospice develops worsening dyspnea over two days. His morphine dose has been stable. On examination, he has new bilateral crackles, an S3 gallop, and jugular venous distension. His weight has increased by 4 kg over the past week. His furosemide dose is 40 mg daily. Which of the following is the most appropriate intervention for his dyspnea?

A. Increase his morphine dose because dyspnea in hospice patients should be treated solely with opioids

B. Increase furosemide to 80 mg daily (and/or add metolazone) to address the volume overload causing his dyspnea — this is a symptom-directed intervention consistent with comfort goals

- C. Restrict his fluid intake to 500 mL daily and apply a sodium-restricted diet
- D. Transfer to the hospital for IV diuretic therapy because oral diuretics are always insufficient for decompensation

109. A 67-year-old woman with metastatic colon cancer tells her palliative care physician, "I don't care about living longer. I just want to be comfortable and spend time with my grandchildren. That's all that matters to me." The physician should interpret this statement as which of the following?

- A. An expression of suicidal ideation requiring psychiatric evaluation
- B. A rejection of all medical care including symptom management
- C. Evidence that the patient is in denial about the severity of her illness
- D. A clear articulation of her values and goals that should guide all subsequent treatment planning — comfort and quality of time with family are her priorities

110. A 72-year-old man with advanced pancreatic cancer has been on hospice for two months. During a routine visit, the hospice nurse notes that the patient's pain, which was previously well-controlled on morphine SR 60 mg every 12 hours, has significantly worsened over the past three days. His corrected calcium is 15.2 mg/dL. His confusion has also increased. Which of the following is the most clinically important implication of the elevated calcium?

- A. The hypercalcemia is an incidental finding unrelated to his worsening pain and confusion
- B. Calcium levels above 15 mg/dL are always immediately fatal and no treatment is possible
- C. The hypercalcemia is both causing his confusion AND may be contributing to his worsening pain (hypercalcemia causes bone pain, abdominal pain, and can lower the pain threshold) — treating the hypercalcemia may improve multiple symptoms simultaneously
- D. The hypercalcemia indicates that his opioid dose is too high and should be reduced

111. A palliative care physician is reviewing the care of a 59-year-old woman with advanced breast cancer who was recently started on methadone for cancer pain. She was rotated from high-dose morphine to methadone three days ago. On day 3, she appears comfortable and reports good pain control. The physician should be most vigilant for which of the following delayed complications?

- A. Delayed-onset sedation and respiratory depression from methadone's long, variable half-life (8–59 hours) — tissue levels may continue to rise for 5–7 days after initiation, potentially producing toxicity that was not apparent on day 3
- B. Immediate tolerance requiring dose escalation within 48 hours of starting methadone
- C. Acute allergic reaction that typically occurs 72 hours after the first dose
- D. Renal failure from direct methadone nephrotoxicity

112. A 68-year-old man with stage IV lung cancer is enrolled in hospice. He has been declining and is now bedbound. His wife asks the hospice nurse, "Should I still be giving him his statin and his blood pressure pill? He can barely swallow." Which of the following is the most appropriate response?

- A. "Those medications should be continued because stopping them could be dangerous."
- B. "That's a great question to discuss with his hospice physician. In general, medications that provide preventive benefits over months to years — like statins — can often be safely stopped when someone's prognosis is short, while medications that directly address comfort — like pain or nausea medicines — are continued. Let's review each one together with the doctor."
- C. "You should stop all of his medications immediately because he is on hospice."
- D. "I'm not qualified to answer medication questions — you'll need to ask your pharmacist."

113. A 77-year-old woman with advanced heart failure is transferred from the hospital to a skilled nursing facility. She is on hospice, receiving routine home care at the SNF. Her hospital discharge orders include IV morphine 2 mg every 4 hours PRN, IV furosemide 40 mg daily, and IV pantoprazole 40 mg daily. Which of the following is the most critical medication reconciliation concern during this transition?

- A. The pantoprazole dose is too high for a hospice patient and should be reduced
- B. All medications should be continued in their IV formulations to avoid any disruption
- C. The morphine route should be verified — was she tolerating oral medications at the hospital? If so, the IV orders may represent a transcription error. If not, the medications need to be converted to appropriate non-IV routes available at the SNF
- D. The furosemide should be discontinued immediately because diuretics are not compatible with hospice care

114. A 61-year-old woman with metastatic cervical cancer has been on hospice for four weeks. She develops severe, unrelenting pelvic pain that is not adequately controlled by her current opioid regimen (oral morphine equivalent 300 mg/day). She is also experiencing significant opioid side effects (sedation, confusion). The pain management team recommends an intrathecal pump. Using the standard 300:1 oral-to-intrathecal morphine conversion, what is the approximate daily intrathecal morphine dose?

- A. 30 mg intrathecal morphine per day
- B. 10 mg intrathecal morphine per day
- C. 1 mg intrathecal morphine per day
- D. 3 mg intrathecal morphine per day

115. A palliative care consultation is requested for a 55-year-old woman with end-stage renal disease who has been on hemodialysis for seven years. She has diabetes, peripheral vascular disease with bilateral below-knee amputations, blindness from diabetic retinopathy, and frequent dialysis access complications. She has decision-making capacity and states, "I've had enough. I don't want any more dialysis." Her nephrologist is concerned because he believes dialysis is still benefiting her medically. Which of the following is the most appropriate response?

- A. The patient's informed refusal of dialysis must be honored because she has decision-making capacity and the right to refuse any medical treatment, even life-sustaining treatment
- B. The nephrologist should override the patient's decision because dialysis is medically beneficial
- C. Psychiatric consultation is mandatory before any decision to stop dialysis can be honored
- D. The patient should be required to continue dialysis for a minimum of 30 days while completing a formal appeals process

116. A 72-year-old man with advanced COPD on hospice has been having increasingly frequent episodes of severe dyspnea. His wife is being trained to manage these episodes at home. The hospice nurse is educating the wife about the comfort kit. Which of the following medications should be included in the comfort kit for management of acute dyspnea episodes?

- A. An inhaled corticosteroid for airway inflammation
- B. Morphine (oral concentrate or injectable) for relief of dyspnea, plus lorazepam for anxiety — both available for immediate administration when an acute dyspnea episode occurs

- C. An oral antibiotic for presumptive pneumonia treatment during acute episodes
- D. An albuterol metered-dose inhaler as the sole rescue medication for all dyspnea episodes

117. A 60-year-old man with end-stage liver disease on hospice has been taking morphine for abdominal pain from hepatic capsule distension. He develops increasing somnolence and confusion. His liver function has deteriorated significantly over the past week (bilirubin increased from 8 to 18 mg/dL). Which pharmacokinetic consideration most likely explains his increasing sedation?

- A. Morphine is metabolized by the kidneys, and his liver disease has caused secondary renal failure
- B. His increasing pain has led him to take more morphine than prescribed
- C. Morphine's oral bioavailability has always been 100% and is not affected by liver function
- D. Worsening hepatic function has reduced first-pass metabolism of oral morphine, increasing its systemic bioavailability and causing higher drug levels at the same oral dose

118. A 55-year-old woman with advanced ovarian cancer is receiving palliative care. She develops severe hiccups that have persisted for four days. Her current medications include dexamethasone 8 mg daily for cerebral edema, morphine for pain, and ondansetron for nausea. The hiccups began shortly after her dexamethasone dose was increased from 4 mg to 8 mg daily. Based on the most likely etiology, which of the following is the most appropriate initial intervention?

- A. Add gabapentin 300 mg three times daily as first-line anti-hiccup medication without addressing the dexamethasone
- B. Start chlorpromazine 25 mg three times daily as the only FDA-approved treatment for hiccups
- C. Reduce the dexamethasone dose or switch to an alternative corticosteroid, as dexamethasone is a well-recognized cause of persistent hiccups, and the temporal relationship strongly supports this etiology
- D. Perform an MRI of the brain to evaluate for brainstem metastases as the cause of the hiccups

119. A 76-year-old man with advanced prostate cancer and widespread bone metastases has pain that is partially controlled with oxycodone. His palliative care physician recommends adding single-fraction palliative radiation (8 Gy) to his most painful bone metastasis in the right hip. Based on the evidence, what is the expected onset and likelihood of pain relief from single-fraction radiation for this uncomplicated bone metastasis?

- A. Pain relief begins within 2–4 weeks in approximately 60–80% of patients, with complete relief in 20–30%
- B. Pain relief is immediate (within 24 hours) in greater than 90% of patients
- C. Pain relief requires a minimum of 6 weeks and occurs in less than 30% of patients
- D. Single-fraction radiation provides only placebo effect and has no true analgesic benefit

120. A hospice social worker is meeting with the 42-year-old wife of a patient who died last week. The wife says, "Sometimes I think I hear him calling my name from the other room. Am I losing my mind?" Which of the following is the most accurate and therapeutic response?

- A. "That is a hallucination and may indicate the onset of a psychotic disorder. I'd like to refer you for psychiatric evaluation."
- B. "What you're describing — hearing or sensing the presence of your loved one — is a common and normal experience in early bereavement, reported by 30–60% of bereaved people. It does not mean you are losing your mind. For most people, these experiences decrease over time and are often experienced as comforting rather than frightening."
- C. "You should try to distract yourself whenever this happens so that the hallucinations don't become permanent."
- D. "This is a sign that you are not processing your grief correctly. I'd recommend starting grief counseling immediately."

121. A 64-year-old man with metastatic renal cell carcinoma has been on hospice for three months. He has been stable but declining. At his latest recertification, he is entering his third benefit period (the first 60-day period). In addition to the physician's recertification attestation, which of the following is a new requirement for this benefit period that was not required during the first two periods?

- A. A second opinion from an independent palliative care specialist not affiliated with the hospice
- B. Submission of a formal appeal to Medicare documenting why continued enrollment is justified
- C. A comprehensive neuropsychological evaluation to confirm the patient's understanding of hospice
- D. A face-to-face encounter with a hospice physician or nurse practitioner within 30 days before the start of the benefit period

122. A 57-year-old woman with advanced ovarian cancer has been experiencing worsening nausea. Her physician has tried haloperidol (minimal improvement) and ondansetron (no improvement). Her nausea is worst after meals, associated with bloating and early satiety, and she reports feeling "full after just a few bites." Her abdomen is soft, non-distended, with normal bowel sounds. Based on the most likely mechanism, which antiemetic would be most appropriate to add?

- A. Scopolamine transdermal patch for vestibular-mediated nausea exacerbated by meals
- B. Lorazepam 0.5 mg before meals for anticipatory nausea associated with eating
- C. Metoclopramide 10 mg before meals, combining D2 antagonism at the CTZ with prokinetic 5-HT₄ agonism to improve gastric emptying
- D. Dexamethasone 8 mg IV for centrally mediated nausea from presumed brain metastases

123. A 72-year-old man with advanced prostate cancer is on hospice. His wife asks the hospice social worker, "He keeps talking about wanting to write letters to our grandchildren. Is that normal, or is he giving up?" The social worker's most appropriate response is which of the following?

- A. "What your husband is doing is called legacy work — creating meaningful keepsakes and expressing his love for the people who matter most to him. Many patients find that these activities give them a sense of purpose and peace. It's a very healthy way to prepare, and I would encourage you to support him in this."
- B. "He may be experiencing depression, and writing farewell letters could indicate suicidal ideation. I'd like to refer him for psychiatric evaluation."
- C. "He should focus on fighting his disease rather than writing letters. I'll talk to him about maintaining a positive attitude."
- D. "This behavior is unusual and suggests he has given up hope. We should discuss increasing his antidepressant medication."

124. A 66-year-old woman with end-stage COPD on hospice has been on morphine for dyspnea. She is also taking gabapentin for peripheral neuropathy. Over the past week, she has developed worsening confusion, sedation, and unsteadiness. Her creatinine has risen from 1.2 to 3.1 mg/dL. Review of her medications reveals that gabapentin has not been dose-adjusted. Which of the following best explains why her gabapentin requires urgent dose reduction?

- A. Gabapentin is hepatically metabolized, and her liver function is declining in parallel with her renal function
- B. Gabapentin is renally excreted without hepatic metabolism, and declining renal function causes drug accumulation leading to sedation, confusion, ataxia, and myoclonus
- C. Gabapentin interacts with morphine at the mu receptor, producing synergistic respiratory depression
- D. Gabapentin causes direct nephrotoxicity that worsens renal function in a positive feedback loop

125. A 53-year-old man with advanced pancreatic cancer develops new severe mid-back pain that worsens when he lies flat and improves when he sits forward. Over 48 hours, he develops bilateral leg weakness, decreased sensation below the umbilicus, and urinary hesitancy. Dexamethasone 16 mg IV has been administered. MRI reveals a single-level epidural mass at T10 compressing the spinal cord. His ECOG performance status was 1 before symptom onset, and his expected survival is 6–8 months. Based on the Patchell trial evidence, which treatment approach offers the best chance of preserving neurologic function?

- A. Radiation therapy alone (30 Gy in 10 fractions) as the standard of care for all cases of MSCC
- B. High-dose corticosteroids alone with watchful waiting and reassessment in one week
- C. Palliative sedation because spinal cord compression in cancer patients is universally irreversible
- D. Surgical decompression followed by postoperative radiation therapy, which is superior to radiation alone for single-level compression in patients with good performance status and reasonable life expectancy

126. A hospice nurse is visiting a 78-year-old woman with end-stage heart failure. The patient's daughter asks, "Mom hasn't eaten anything in three days. Should we try to feed her?" The patient is drowsy, intermittently responsive, and shows no interest in food. Which of the following responses is most accurate and compassionate?

- A. "Decreased appetite and the loss of interest in food are natural parts of the dying process. Your mother's body is no longer able to use nutrition the way it once could. Offering small sips or ice chips for comfort is appropriate, but forcing food could cause discomfort, nausea, or aspiration. The most important thing you can give her right now is your presence."
- B. "We should place a nasogastric tube immediately to prevent starvation and dehydration."
- C. "She needs a high-calorie protein shake three times daily to maintain her strength for recovery."
- D. "Stop offering any food or fluids immediately because oral intake at this stage is always dangerous."

127. A 60-year-old man with metastatic melanoma has been enrolled in hospice for two months. He develops new seizures from previously undiagnosed brain metastases. A CT head reveals three lesions with significant surrounding edema. Dexamethasone 10 mg IV is administered. An anticonvulsant is needed for seizure prophylaxis. Which of the following is the most appropriate choice given this patient's polypharmacy (opioids, antiemetics, corticosteroids)?

- A. Phenytoin, which has well-established efficacy for seizure prophylaxis in brain metastases
- B. Carbamazepine, which provides additional neuropathic pain benefit alongside seizure control
- C. Levetiracetam, which has minimal hepatic metabolism, few drug interactions, and is available in IV and liquid formulations — critical advantages in a patient on multiple medications who may lose the ability to swallow
- D. Valproic acid, which has broad-spectrum anticonvulsant activity and minimal side effects

128. A 74-year-old man with advanced heart failure on hospice has been managed with furosemide for fluid overload-related dyspnea. His dyspnea has worsened over the past week despite increasing the furosemide dose from 40 mg to 80 mg daily. He has persistent bilateral crackles, JVD, and lower extremity edema. His hospice physician considers adding metolazone. What is the pharmacologic rationale for adding metolazone to furosemide?

- A. Metolazone and furosemide act at the same site in the nephron and produce additive effects
- B. Metolazone blocks sodium reabsorption in the distal convoluted tubule, providing "sequential nephron blockade" that overcomes diuretic resistance when furosemide alone is insufficient
- C. Metolazone provides direct inotropic support that improves cardiac contractility
- D. Metolazone replaces furosemide entirely when loop diuretics become ineffective

129. A 68-year-old woman with advanced breast cancer has been taking opioids for bone pain. She is also on sertraline for depression and tramadol was recently added for a new pain complaint. Within 36 hours of starting tramadol, she develops agitation, diaphoresis, tremor, diarrhea, bilateral lower extremity clonus, and a temperature of 38.7°C. The on-call physician suspects serotonin syndrome. After discontinuing all serotonergic agents, what is the specific pharmacologic antidote for serotonin syndrome?

- A. Naloxone, which reverses opioid-mediated serotonin release at the synaptic cleft
- B. Dantrolene, which treats the muscular rigidity component through direct muscle relaxation

C. Bromocriptine, which acts as a dopamine agonist to counterbalance serotonin excess

D. Cyproheptadine, a serotonin antagonist administered orally at 12 mg initially followed by 4–8 mg every 6 hours

130. A palliative care physician is meeting with a 55-year-old woman with metastatic lung cancer. She has been told by her oncologist that no further chemotherapy options are available. She says, "But I read online about a clinical trial in Germany. Don't you think I should try everything possible?" Which of the following responses best balances empathy with clinical honesty?

A. "I can hear how much you want to keep fighting, and that tells me a lot about who you are. Let's talk about what you've read and what you're hoping for. I also want to make sure we're doing everything we can to help you feel as well as possible right now, whatever you decide about the trial."

B. "Clinical trials in other countries are never legitimate. You should not pursue this."

C. "If that's what you want to do, I'll support whatever you decide without any further discussion."

D. "At this point, further treatment is futile. You should focus on accepting your diagnosis and enrolling in hospice."

131. A 71-year-old woman with metastatic colon cancer develops new-onset right lower quadrant pain, fever, and rebound tenderness. CT abdomen reveals a contained perforation near the sigmoid tumor with a small pericolic abscess. She is on hospice with comfort measures only. The surgeon recommends exploratory laparotomy. The palliative care team should approach this situation by considering which of the following?

A. Surgery is never appropriate for hospice patients regardless of the clinical scenario

B. The patient should be discharged from hospice before any surgical evaluation can occur

C. Whether the surgical intervention would relieve distressing symptoms (pain from the abscess/perforation) and whether the expected benefit outweighs the procedural risk, burden, and recovery time — guided by the patient's goals of care and current functional status

D. The surgeon's recommendation should be followed without additional palliative care input

132. A 63-year-old man with advanced gastric cancer is on hospice. He has been taking morphine sustained-release 90 mg every 12 hours with morphine IR 30 mg every 3 hours as needed for breakthrough pain. He uses approximately 5 breakthrough doses per day. His total 24-hour oral morphine consumption is 330 mg. The hospice physician wants to convert him to a continuous

subcutaneous morphine infusion because he can no longer swallow. What is the correct 24-hour subcutaneous morphine infusion dose?

- A. 330 mg SC per 24 hours, maintaining the same total daily dose regardless of route
- B. 110 mg SC per 24 hours, using the 3:1 oral-to-parenteral ratio for morphine
- C. 55 mg SC per 24 hours, applying an additional 50% reduction for the route change
- D. 165 mg SC per 24 hours, using a 2:1 conversion ratio

133. A hospice interdisciplinary team is discussing a case during their weekly meeting. The chaplain reports that a 70-year-old man with advanced lung cancer has expressed profound spiritual distress, stating, "I feel like God has abandoned me. My whole life I've been faithful, and now this is how I'm repaid." The chaplain asks the team for guidance. Which of the following is the most appropriate role for the chaplain in addressing this patient's spiritual distress?

- A. Refer the patient to a psychiatrist for evaluation of depression, as spiritual distress is a manifestation of mental illness
- B. Prescribe an anxiolytic to reduce the patient's spiritual distress, which is likely driven by anxiety
- C. Tell the patient that his feelings of abandonment are incorrect and provide theological reassurance that God has not abandoned him
- D. Continue to provide spiritual care by exploring the patient's feelings of abandonment, facilitating his engagement with his own faith tradition, and offering pastoral presence without attempting to "fix" his spiritual crisis — connecting him with his own clergy if he desires

134. A 58-year-old woman with advanced cervical cancer is experiencing severe neuropathic pain in her perineum and rectum from tumor invasion of the sacral nerve roots. She is on high-dose opioids and gabapentin with only partial relief. The pain management team recommends a ganglion impar block. Which anatomic structure does the ganglion impar block target, and what is its primary indication?

- A. The ganglion impar is a solitary retroperitoneal ganglion located anterior to the sacrococcygeal junction that transmits visceral afferent pain from the perineum, rectum, anus, and vulva — making it the targeted block for perineal and rectal cancer pain
- B. The ganglion impar is located at the T12-L1 level and is primarily indicated for upper abdominal visceral pain
- C. The ganglion impar is a cervical ganglion that controls sympathetic innervation of the upper extremity

D. The ganglion impar is located in the lumbar plexus and is indicated for lower extremity neuropathic pain

135. A 75-year-old man with advanced COPD and oxygen dependence has been on hospice for five months. His hospice physician notes that his overall trajectory has been slowly declining, but he recently had a "good week" — eating more, walking to the kitchen daily, and visiting with family. His wife interprets this as improvement and asks whether he should be discharged from hospice. Which of the following responses best addresses her concern?

A. "Yes, his improvement suggests he no longer qualifies for hospice, and we should initiate the discharge process."

B. "His good week is a sign that his COPD medications are working and he may recover."

C. "Short-term improvements within an overall declining trajectory are common in organ failure diseases — they reflect the characteristic fluctuating pattern of this type of illness rather than a true recovery. His overall trajectory remains consistent with hospice-level care."

D. "We should transfer him to the hospital for evaluation to determine whether his improvement represents a reversible condition."

136. A 60-year-old man with metastatic pancreatic cancer is on hospice. He has been on opioid therapy with adequate pain control. He develops severe, intractable pruritus that is significantly impairing his quality of life. He has no liver disease and his bilirubin is normal. His opioid is morphine. The pruritus began after his last morphine dose increase. Which of the following is the most likely mechanism and most appropriate initial management?

A. Cholestatic pruritus from undiagnosed biliary obstruction requiring ERCP

B. Opioid-induced pruritus from histamine release and/or central mu receptor activation — management includes opioid rotation to fentanyl (which has minimal histamine-releasing properties) or addition of an antihistamine

C. Uremic pruritus from undiagnosed renal failure requiring dialysis

D. Dermatologic condition requiring biopsy and dermatology consultation

137. A 67-year-old woman with advanced breast cancer has been on hospice for three months. She develops a new, painful, ulcerating chest wall mass that has broken through the skin. The wound is producing moderate exudate and a strong, foul odor from anaerobic bacterial colonization. Her daughter reports that the odor is so severe that family members are reluctant to visit. Which topical agent is most effective for controlling the malodor?

- A. Topical silver sulfadiazine cream applied daily for broad-spectrum antimicrobial effect
- B. Hydrogen peroxide irrigation performed twice daily to oxidize anaerobic organisms
- C. Povidone-iodine solution applied with each dressing change for antisepsis
- D. Topical metronidazole 0.75% gel applied directly to the wound surface to target the anaerobic bacteria responsible for the malodor

138. A 73-year-old man with advanced heart failure and a left ventricular assist device (destination therapy) has been on hospice for one month. He has progressively declined and is now bedbound, confused, and dependent for all ADLs. He had previously documented his wishes clearly: "When I can no longer recognize my family or communicate meaningfully, I want the LVAD turned off." His wife, who is his health care proxy, confirms these were his consistent wishes. The palliative care team is preparing for LVAD deactivation. Which of the following is the most important preparatory step?

- A. Pre-medication with opioids and benzodiazepines to ensure the patient is comfortable during and after device deactivation, as death will occur within minutes once the LVAD is stopped
- B. Obtaining a court order to authorize the LVAD deactivation because it will result in the patient's death
- C. Performing a trial of LVAD speed reduction to determine if the patient can survive without the device
- D. Transferring the patient to the ICU for LVAD deactivation because it cannot be performed in the home setting

139. A 56-year-old woman with stage IV non-small cell lung cancer with an EGFR mutation is on hospice. She has been stable for two months on comfort-focused care. She learns about a new FDA-approved EGFR-targeted agent and tells her hospice physician she wants to try it. She understands that this would require revocation of hospice. Which of the following statements most accurately describes her options?

- A. She has permanently forfeited her right to disease-directed therapy by enrolling in hospice
- B. She may revoke hospice but can never re-enroll once she has revoked
- C. She may revoke hospice at any time to pursue disease-directed therapy, and she may re-elect hospice in the future if she chooses — hospice revocation is voluntary and reversible
- D. She must obtain approval from the hospice medical director before she can revoke her hospice election

140. A 68-year-old man with metastatic colon cancer is on hospice. His pain has been well-managed on oxycodone. He is currently taking oxycodone CR 40 mg every 12 hours. He develops progressive renal impairment (GFR declining from 60 to 18 mL/min) and new-onset confusion and myoclonus. The palliative care physician suspects opioid metabolite accumulation. Which of the following opioid management strategies is most appropriate?

- A. Increase the oxycodone dose to overcome the presumed tolerance causing his worsening symptoms
- B. Rotate to fentanyl, which has no active metabolites and is the preferred opioid in renal impairment
- C. Add naloxone to reverse the metabolite accumulation while continuing the same opioid
- D. Switch to meperidine, which is safer in renal failure than oxycodone

141. A 71-year-old woman with advanced pancreatic cancer has been having persistent hiccups for five days. They are interfering with her sleep, eating, and quality of life. Her current medications include dexamethasone 4 mg daily (started 3 weeks ago), morphine for pain, and ondansetron for nausea. She has no brain metastases on recent imaging. Which medication on her current list is the most likely cause of her hiccups?

- A. Morphine, which causes hiccups through direct stimulation of the phrenic nerve
- B. Ondansetron, which triggers hiccups through serotonin receptor modulation in the brainstem
- C. A combination of all three medications acting through independent mechanisms simultaneously
- D. Dexamethasone, which is a well-recognized cause of persistent hiccups and has a clear temporal relationship to symptom onset in this patient

142. A palliative care team is caring for a 65-year-old man with advanced gastric cancer. During a family meeting, his 42-year-old daughter becomes angry and says, "You're all giving up on my father. If you won't fight for him, we'll find doctors who will." The palliative care physician's most effective initial response is which of the following?

- A. "I can hear how frightened you are, and I understand why you feel this way. Your love for your father is clear. Can you help me understand what worries you most? I want to make sure we're on the same page about what's best for him."
- B. "We are not giving up. Let me show you his lab results and explain why further chemotherapy won't help."

C. "You have every right to seek a second opinion. I'll prepare the transfer paperwork."

D. "I understand your frustration, but the medical facts are clear and we need to accept reality."

143. A 59-year-old woman with advanced breast cancer has bone metastases in her spine and pelvis. She has been on opioid therapy with gabapentin for neuropathic pain. She develops a new vertebral compression fracture at L2 causing acute, severe localized pain that is not responding to her current opioid regimen. Her ECOG is 2 and her expected survival is 4 months. In addition to optimizing her opioid dose, which procedure would be most likely to provide rapid, targeted pain relief for this specific compression fracture?

A. Palliative radiation therapy (single fraction 8 Gy) directed at the L2 vertebra

B. Epidural corticosteroid injection at the L2 level

C. Vertebroplasty or kyphoplasty, which provides pain relief in 70–90% of patients within 24–72 hours by stabilizing the fractured vertebral body

D. Intrathecal pump placement for continuous spinal drug delivery

144. A 77-year-old man with end-stage COPD is actively dying at home on hospice. His wife reports that he has developed a loud, rattling sound with each breath that started approximately 2 hours ago. He is unresponsive. The hospice nurse assesses the patient and confirms the "death rattle." She administers atropine 1% ophthalmic drops 2 drops sublingually. One hour later, the rattling persists with minimal improvement. Which of the following statements best explains why the rattling has not resolved?

A. Atropine is ineffective for the death rattle and should never be used in this setting

B. Anticholinergic agents reduce NEW secretion production but do not dry EXISTING accumulated secretions — the rattling from previously pooled secretions may persist even after the medication takes effect

C. The dose of atropine was insufficient and should be increased to 10 drops sublingually

D. The rattling is caused by bronchospasm, not secretions, and requires a bronchodilator instead

145. A 62-year-old man with advanced hepatocellular carcinoma on hospice has worsening ascites requiring drainage every five days. He has an indwelling peritoneal catheter. His ascites is from peritoneal carcinomatosis, NOT from portal hypertension. His wife asks whether he needs albumin infusions after each drainage, as she read about this online. Which of the following is the most accurate response?

- A. Albumin replacement is always required after any volume of ascitic fluid drainage regardless of the cause
- B. Albumin should be infused before drainage, not after, to improve oncotic pressure gradient
- C. Albumin replacement is not covered by the hospice benefit under any circumstances
- D. Albumin replacement is standard practice for large-volume paracentesis in cirrhotic (portal hypertensive) ascites but is NOT routinely required for malignant ascites from peritoneal carcinomatosis, where the mechanism is different

146. A 70-year-old man with end-stage heart failure and diabetes mellitus has been on hospice for three months. His medications include furosemide 80 mg daily, metformin 1,000 mg BID, atorvastatin 40 mg daily, morphine SR 15 mg BID for dyspnea, and senna-docusate. His prognosis is estimated at 6–8 weeks. During a routine visit, the hospice physician reviews his medications for de-prescribing opportunities. Which medication is the most appropriate to discontinue based on its risk-benefit profile given his prognosis?

- A. Atorvastatin, which provides cardiovascular risk reduction over years — a timeframe far exceeding his prognosis — and offers no symptom benefit
- B. Furosemide, which should be stopped because diuretics are disease-directed therapies incompatible with hospice
- C. Morphine, which should be reduced to the lowest possible dose to minimize opioid-related risks
- D. Senna-docusate, which is no longer needed because decreased oral intake will naturally prevent constipation

147. A 58-year-old man with advanced esophageal cancer has developed complete dysphagia and cannot swallow any oral medications. He has been taking dexamethasone 8 mg PO daily for appetite stimulation. The hospice physician needs to convert this to an alternative route. Which of the following is the most appropriate approach?

- A. Discontinue the dexamethasone abruptly because the appetite benefit has waned
- B. Crush the dexamethasone tablets and administer them rectally as a suspension
- C. Convert to dexamethasone 8 mg subcutaneously daily, which is available in injectable form and has equivalent systemic bioavailability to the oral dose
- D. Replace dexamethasone with hydrocortisone cream applied topically for systemic absorption

148. A 72-year-old woman with end-stage COPD on hospice is being managed by the interdisciplinary team. The hospice aide reports that during her last visit, the patient seemed more confused than usual and had bruises on her upper arms that were not present at the prior visit. The aide also noted that the patient's son, who lives with her, appeared intoxicated. What is the most appropriate initial response by the hospice team?

- A. Document the observation and reassess at the next scheduled visit in one week
- B. Assess the patient for elder abuse — conduct a private assessment of the patient's safety, assess for additional signs of physical abuse or neglect, and if abuse is suspected, report to adult protective services as required by mandatory reporting laws
- C. Confront the son about his alcohol use and threaten legal consequences if it continues
- D. Transfer the patient to a nursing facility immediately without further assessment

149. A 65-year-old man with advanced pancreatic cancer is on hospice and has been on high-dose opioids for pain. He is also taking dexamethasone 4 mg daily for appetite stimulation. Over the past week, his blood glucose readings have been consistently above 300 mg/dL. He was previously well-controlled on metformin. He is symptomatic with polyuria, polydipsia, and blurred vision. Which of the following is the most appropriate approach to his hyperglycemia?

- A. Discontinue the dexamethasone immediately to resolve the hyperglycemia, regardless of its effect on appetite
- B. Ignore the hyperglycemia because glucose control is not relevant in hospice patients
- C. The hyperglycemia is irrelevant because he is on hospice and strict glucose control provides no long-term benefit
- D. Manage the symptomatic hyperglycemia because his polyuria, polydipsia, and blurred vision are causing distress — consider reducing the dexamethasone dose, adding insulin for symptom relief, or both, while balancing glucose management against the appetite benefit of the corticosteroid

150. A 74-year-old woman with metastatic breast cancer has been on palliative care for eight months. She tells her physician, "I feel like I've become invisible. Nobody asks me what I think anymore — they just talk to my husband and my daughter. I'm still here." This statement most directly reflects which of the following patient needs?

- A. The need for autonomy, agency, and to be treated as a person with ongoing capacity and relevance — serious illness should not eliminate the patient's voice from their own care and life decisions
- B. A symptom of paranoid ideation requiring psychiatric evaluation
- C. A request for increased medication to treat her emotional distress
- D. Evidence that her family is providing inadequate caregiving

151. A 59-year-old man with advanced gastric cancer enrolled in hospice develops new-onset jaundice with a total bilirubin of 12 mg/dL. CT abdomen shows a mass in the head of the pancreas compressing the common bile duct. He is experiencing distressing pruritus from cholestasis. The hospice physician considers whether biliary stenting would be appropriate. Which of the following best guides this decision?

- A. Biliary stenting is categorically excluded from the hospice benefit as a procedural intervention
- B. Biliary stenting should only be performed if the patient revokes hospice first
- C. If biliary stenting would relieve the distressing pruritus (a comfort-focused goal), it may be appropriate as a symptom-relieving intervention consistent with the hospice plan of care, with consideration of procedural risk, burden, and the patient's goals
- D. Biliary stenting is only indicated for patients with a prognosis greater than 12 months

152. A 66-year-old man with advanced prostate cancer on hospice has painful bone metastases in his right femur. His oncologist recommends palliative radiation to the most painful site. His pain at the site is severe (8/10), and his expected survival is 3–4 months. Based on the strongest evidence, which radiation fractionation provides equivalent pain relief while minimizing treatment burden?

- A. 40 Gy delivered in 20 fractions over 4 weeks for maximum dose delivery to the tumor
- B. A single fraction of 8 Gy, which multiple randomized trials have demonstrated provides pain relief equivalent to multi-fraction regimens for uncomplicated painful bone metastases
- C. 30 Gy delivered in 10 fractions as the only evidence-based option for bone metastases
- D. 50 Gy delivered in 25 fractions for definitive treatment of the bone metastasis

153. A 70-year-old man with advanced COPD is actively dying at home on hospice. He has Cheyne-Stokes respirations with apneic pauses lasting 20 seconds. His wife asks whether she should call 911

during the pauses. The hospice nurse's most appropriate response includes which of the following key messages?

- A. "You should call 911 during any pause longer than 15 seconds because this indicates a cardiac emergency requiring immediate resuscitation."
- B. "The pauses are caused by an undiagnosed cardiac arrhythmia that requires monitoring with a bedside telemetry unit."
- C. "The irregular breathing pattern is caused by pneumonia and will resolve with antibiotics."
- D. "Cheyne-Stokes breathing — the cycle of deep breaths followed by pauses — is a normal and expected part of the dying process. The pauses do not mean he is suffocating. He is not in distress. We will stay with you and make sure he remains comfortable. You do not need to call 911."

154. A 63-year-old woman with metastatic ovarian cancer and malignant bowel obstruction has been managed medically with octreotide, glycopyrrolate, and dexamethasone. Despite optimal medical management, she continues to vomit approximately 500 mL daily. A venting gastrostomy has been placed. She asks whether she will still be able to eat. Which of the following is the most accurate response?

- A. She may eat and drink small amounts for pleasure — food enters the stomach and is experienced (taste, texture), then drains through the gastrostomy tube rather than passing into the obstructed bowel and causing distension and vomiting
- B. She must remain NPO indefinitely because any oral intake will worsen her bowel obstruction
- C. She may eat full meals because the gastrostomy completely bypasses the obstruction
- D. She may only drink clear liquids because solid food will block the gastrostomy tube

155. A 72-year-old man with advanced heart failure is being transitioned from the hospital to home hospice. He was on IV morphine 3 mg every 4 hours in the hospital (18 mg IV per 24 hours). The discharge team plans to convert to oral morphine SR for home use. Using the standard 3:1 oral-to-parenteral ratio, what is the correct total 24-hour oral morphine dose?

- A. 18 mg oral morphine per day (same number as the IV dose)
- B. 6 mg oral morphine per day (reducing by one-third for the transition to home)

C. 54 mg oral morphine per day, prescribed as approximately 27 mg SR every 12 hours (rounded to nearest available tablet size)

D. 36 mg oral morphine per day (doubling the IV dose)

156. A 55-year-old woman with advanced sarcoma has been on chronic opioid therapy. She is on morphine SR 120 mg every 12 hours. She develops a new pain complaint and her physician adds tramadol 50 mg every 6 hours. She is also on duloxetine 60 mg daily for depression. Within 48 hours, she develops agitation, hyperthermia, clonus, and diaphoresis. Which drug combination is most likely responsible for her symptoms?

A. Morphine and duloxetine causing neuroleptic malignant syndrome

B. Tramadol and the IV contrast agent from a recent CT scan causing an allergic reaction

C. Morphine and tramadol causing opioid-induced hyperalgesia

D. Tramadol (which has serotonin reuptake inhibition activity) combined with duloxetine (an SNRI) causing serotonin syndrome — both agents increase serotonergic tone

157. A hospice bereavement coordinator contacts the 70-year-old wife of a patient who died 14 months ago. During the call, the wife reports that she remains unable to accept that her husband has died, cannot go through his belongings, avoids any place or activity that reminds her of him, and feels that "part of me died with him." She cannot return to her social activities and has lost 20 pounds since his death. She meets DSM-5-TR criteria for prolonged grief disorder. Which psychotherapeutic intervention has the strongest evidence base for this condition?

A. Cognitive behavioral therapy for depression (standard CBT-D)

B. Complicated Grief Treatment (CGT) — a 16-session manualized therapy combining elements of IPT, CBT, and motivational interviewing, with response rates of 50–70% in randomized trials

C. Psychoanalytic psychotherapy exploring childhood attachment patterns

D. Group supportive therapy as the first-line treatment without individual therapy

158. A 64-year-old man with advanced non-small cell lung cancer is enrolled in hospice. He develops a symptomatic malignant pleural effusion causing moderate dyspnea. He has had two thoracenteses in the past three weeks with rapid reaccumulation. His performance status is ECOG 2 and his expected survival is 3–4 months. Which of the following long-term management strategies would best reduce the procedure burden while maintaining symptom control?

- A. Placement of an indwelling pleural catheter (IPC) for intermittent home drainage, which eliminates the need for repeated clinic-based thoracenteses and allows home management by the patient or caregiver
- B. Initiation of high-dose diuretic therapy to prevent effusion reaccumulation
- C. Continuation of serial thoracenteses every 10 days as the most appropriate management
- D. Referral for surgical pleurectomy via thoracotomy as definitive treatment

159. A 57-year-old woman with advanced pancreatic cancer is on hospice. She has been experiencing escalating pain that is not well-controlled on her current opioid regimen (oral morphine equivalent 450 mg/day). She describes her pain as deep, constant, and boring in the epigastrium, radiating to the back. The pain management team recommends a celiac plexus neurolysis. Which of the following statements about celiac plexus neurolysis is most accurate?

- A. Celiac plexus neurolysis should be reserved as a last resort after all other pain management options, including intrathecal pump placement, have failed
- B. Celiac plexus neurolysis provides no benefit beyond what can be achieved with dose escalation of systemic opioids
- C. Celiac plexus neurolysis achieves significant pain relief in 70–90% of patients with pancreatic cancer pain, substantially reduces opioid requirements, and evidence suggests it should be considered early in the disease course — not as a last resort
- D. Celiac plexus neurolysis provides only temporary relief lasting 24–48 hours and must be repeated weekly

160. A 73-year-old woman with end-stage COPD on hospice dies at home. The hospice physician arrives to pronounce death. He identifies the patient, assesses for absence of spontaneous movement and respiratory effort, notes fixed dilated pupils, and auscultates the chest for heart sounds. For how long must he auscultate the precordium before confirming absence of cardiac activity?

- A. 15 seconds of auscultation is sufficient if the patient appears deceased on visual inspection
- B. 30 seconds of auscultation with concurrent palpation of the carotid artery
- C. No specific time is required — a brief listen confirming silence is adequate
- D. At least one full minute of auscultation over the precordium to confirm absence of heart sounds

161. A 66-year-old man with advanced lung cancer has been on hospice for one month. He was previously taking warfarin for a mechanical mitral valve. His INR has been stable at 2.8. His prognosis

is estimated at 8–12 weeks. The hospice team is reviewing his medication list. Which of the following best guides the decision about continuing or discontinuing his anticoagulation?

- A. All anticoagulants should be discontinued immediately upon hospice enrollment regardless of indication
- B. Anticoagulation for a mechanical heart valve carries the highest risk of discontinuation among all anticoagulation indications — valve thrombosis risk is significant, so warfarin should generally be continued as long as the patient is taking oral medications, with transition to LMWH when oral intake ceases
- C. Warfarin should be switched to aspirin because anticoagulation intensity can be reduced in hospice patients
- D. The hospice benefit does not cover INR monitoring, making warfarin continuation impractical

162. A 55-year-old man with advanced melanoma on immunotherapy (nivolumab) develops new-onset severe diarrhea (10 watery stools/day), abdominal cramping, and bloody stool. Stool studies are negative for infectious etiologies including *C. difficile*. His symptoms began two weeks after his last nivolumab infusion. This presentation is most consistent with which of the following?

- A. Immune-related colitis, a well-recognized irAE of checkpoint inhibitor therapy, requiring prompt treatment with systemic corticosteroids (prednisone 1–2 mg/kg/day) and holding of immunotherapy
- B. Irritable bowel syndrome flare triggered by the stress of cancer treatment
- C. Food poisoning from a recent dietary indiscretion
- D. Colon cancer as a second primary malignancy unrelated to his melanoma

163. A 74-year-old man with advanced heart failure on hospice has an ICD. The hospice physician has discussed ICD deactivation, and the patient agrees. The device representative has reprogrammed the ICD to disable the shock function. The patient's family asks whether the magnet that was placed over the device needs to remain in place now that the device has been reprogrammed. Which of the following is the most accurate response?

- A. The magnet must remain in place permanently because the reprogramming only partially disables the ICD
- B. The magnet should remain in place as a backup in case the reprogramming fails
- C. The magnet has been providing the shock suspension and should not be removed until the device is surgically explanted

D. The magnet can now be removed — the device representative has permanently reprogrammed the ICD to disable shock delivery, and the magnet is no longer needed

164. A 60-year-old woman with advanced ovarian cancer is on hospice. She has been on opioid therapy for abdominal pain. She develops new-onset bilateral lower extremity edema. Physical examination reveals pitting edema to the mid-thighs bilaterally, normal skin texture, and negative Stemmer's sign. She has no JVD and no crackles on lung auscultation. Her serum albumin is 1.8 g/dL. Which of the following is the most likely cause of her edema?

- A. Deep vein thrombosis requiring emergent anticoagulation
- B. Heart failure exacerbation requiring furosemide and cardiology consultation
- C. Opioid-induced fluid retention that will resolve with dose reduction
- D. Hypoalbuminemia from malnutrition and cancer cachexia causing decreased oncotic pressure and third-spacing of fluid — the low albumin (1.8 g/dL) and absence of cardiac findings (no JVD, no crackles) point to a non-cardiac mechanism

165. A 71-year-old woman with advanced pancreatic cancer is enrolled in hospice. She develops a urinary tract infection causing dysuria, suprapubic pain, and low-grade fever. She is alert, comfortable at baseline, and enjoying visits from her family. Her prognosis apart from the UTI is estimated at 3–4 months. Her goals are comfort-focused. Which of the following approaches to antibiotic therapy is most appropriate?

- A. Transfer to the hospital for IV antibiotics and urine culture with sensitivities
- B. Treat with an appropriate oral antibiotic because the UTI is causing distressing symptoms (dysuria, pain, fever) that antibiotics can relieve, consistent with comfort-focused goals
- C. Withhold antibiotics because the patient is on hospice and infections should not be treated
- D. Prescribe a 30-day course of prophylactic antibiotics to prevent future UTIs

166. A 63-year-old man with advanced gastric cancer is on hospice. He has been taking morphine for pain. His wife calls the hospice nurse concerned that he has been "jerking in his sleep" — she describes sudden, involuntary muscle jerks affecting his arms and legs that occur several times per hour. He is not in pain and his current morphine dose is morphine SR 60 mg every 12 hours. His most recent creatinine was 1.1 mg/dL (normal). Which of the following is the most likely cause of his myoclonus and the most appropriate initial management?

- A. Opioid-induced myoclonus — a dose-dependent neurotoxic effect that is managed initially with dose reduction if pain control allows, opioid rotation to fentanyl if dose reduction is not feasible, and/or addition of clonazepam 0.5 mg at bedtime for symptomatic treatment
- B. New-onset epilepsy requiring immediate anticonvulsant loading with levetiracetam
- C. Serotonin syndrome from a previously unidentified drug interaction
- D. Restless leg syndrome requiring dopamine agonist therapy

167. A palliative care physician is caring for a 55-year-old woman with advanced breast cancer who has been on stable opioid therapy. She is also on tamoxifen. She develops new moderate neuropathic pain in her feet from chemotherapy-induced peripheral neuropathy. Her physician considers adding an adjuvant analgesic. Which of the following adjuvant analgesics should be AVOIDED due to a clinically significant drug interaction with tamoxifen?

- A. Gabapentin, which interferes with tamoxifen absorption in the GI tract
- B. Pregabalin, which accelerates tamoxifen metabolism through CYP3A4 induction
- C. Duloxetine, which inhibits CYP2D6 — the enzyme required to convert tamoxifen to its active metabolite endoxifen — potentially reducing tamoxifen's anticancer efficacy
- D. Nortriptyline, which displaces tamoxifen from plasma protein binding sites

168. A 78-year-old man with advanced dementia (FAST 7E) has been on hospice for 10 months. He is bedbound, non-verbal, and dependent for all ADLs. He develops a fever of 39.2°C and tachypnea. This is his fourth episode of aspiration pneumonia in the past year. Each prior episode was treated with antibiotics, and he returned to his baseline after each treatment. His daughter, who is his health care proxy, asks the hospice physician for guidance. Which of the following considerations is most important in deciding whether to treat this fourth episode?

- A. The antibiotic should be prescribed automatically because fever always indicates a treatable, reversible condition
- B. The daughter's emotional preference should override all clinical considerations
- C. The cost of the antibiotic compared to the hospice per diem rate should be the primary factor
- D. The pattern of recurrent aspiration pneumonia despite repeated treatment reflects the natural trajectory of advanced dementia — each antibiotic course treats the acute infection but does not change the underlying aspiration risk, and the decision should weigh whether treatment serves comfort goals or merely prolongs the dying process

169. A 60-year-old man with end-stage renal disease who discontinued dialysis eight days ago is now obtunded. His family is at the bedside. They notice that his hands and arms have been jerking intermittently. The hospice nurse explains that these movements are most likely uremic myoclonus. Which of the following medications is most appropriate for managing his myoclonus?

- A. Phenytoin loading dose for presumed seizure activity
- B. Lorazepam 0.5–1 mg sublingually every 6–8 hours or clonazepam 0.5 mg twice daily, which effectively suppresses myoclonus without the need for anticonvulsant loading
- C. Haloperidol 2 mg subcutaneously every 6 hours for its antidopaminergic effects on movement
- D. Morphine dose increase to sedate the patient through the myoclonic episodes

170. A palliative care physician is completing the death certificate for a 75-year-old man who died of respiratory failure from metastatic prostate cancer. The physician lists "cardiac arrest" on Part I, Line a. The funeral home contacts the physician's office indicating that the death certificate may need correction. Which of the following best explains why "cardiac arrest" is problematic as a cause of death?

- A. "Cardiac arrest" is the mechanism of death common to virtually all deaths and does not provide information about the disease that caused the death — the death certificate should specify the disease process (e.g., "Respiratory failure" due to "Metastatic prostate cancer")
- B. "Cardiac arrest" is only appropriate on death certificates when the death was witnessed by a cardiologist
- C. "Cardiac arrest" cannot be listed unless cardiac monitoring confirmed the terminal rhythm
- D. "Cardiac arrest" is acceptable for all deaths and does not require correction

171. A 67-year-old woman with end-stage heart failure on hospice is actively dying. Her family reports that over the past 12 hours, she has had a dramatic improvement — she is alert, asking for food, and talking to family members for the first time in days. Her vital signs remain abnormal, and her underlying clinical trajectory has not changed. The hospice nurse should counsel the family that this phenomenon most likely represents which of the following?

- A. Evidence of clinical recovery requiring transfer to the hospital for re-evaluation
- B. A medication interaction causing temporary alertness that can be corrected by adjusting her regimen

C. A terminal rally (terminal lucidity) — a transient, poorly understood period of improvement that may occur hours to days before death, not indicating recovery but rather a temporary phenomenon that is often followed by rapid decline

D. Resolution of a concurrent infection that was masked by her underlying heart failure

172. A 54-year-old man with advanced sarcoma has severe pain managed with high-dose opioids. His pain management specialist recommends a trial of low-dose ketamine infusion. Before starting ketamine, the physician should inform the patient about which of the following potential adverse effects that are most relevant at subanesthetic doses?

A. Severe hepatotoxicity requiring weekly liver function monitoring

B. Irreversible peripheral neuropathy from chronic ketamine exposure

C. Complete amnesia for the entire duration of the ketamine infusion

D. Dissociative symptoms (vivid dreams, hallucinations, feeling of detachment), dizziness, nausea, and potential emergence reactions — which may be minimized by concurrent benzodiazepine administration

173. A 72-year-old woman with metastatic lung cancer has been referred to palliative care. During the initial consultation, the physician notes that the patient is from a culture where medical decisions are typically made collectively by the family, and the patient has explicitly stated that she wants her eldest son to receive all medical information and make decisions on her behalf. She is cognitively intact. Which of the following is the most ethically appropriate approach?

A. Insist on providing all medical information directly to the patient because Western bioethics requires full individual disclosure

B. Honor the patient's autonomous decision to delegate information management and decision-making authority to her eldest son, as this represents her own culturally informed exercise of autonomy

C. Report the family for preventing the patient from receiving medical information

D. Provide information to both the patient and the son simultaneously regardless of the patient's stated preference

174. A hospice aide is caring for a 79-year-old woman with end-stage COPD at home. During a bathing visit, the aide notices that the patient has significant bruising on both upper arms in a pattern consistent with handgrip marks. The patient lives with her adult grandson, who has a history of substance use. The aide reports this to the hospice nurse. What is the most appropriate next step?

- A. The hospice nurse should assess the patient for elder abuse — conduct a private conversation with the patient about the bruising, assess for additional signs of abuse or neglect, document the findings, and if abuse is suspected, report to adult protective services as required by mandatory reporting laws
- B. Wait for additional evidence before taking any action because bruising in elderly patients is common
- C. Confront the grandson directly about the bruising and demand an explanation
- D. Document the observation in the chart and reassess in two weeks

175. A 66-year-old man with advanced pancreatic cancer is on hospice. He has been stable for three months. At his latest recertification, the hospice physician determines that his clinical trajectory continues to support a prognosis of six months or less. However, the patient's family is surprised that he is "still alive after six months on hospice" and asks whether he is "really dying." Which of the following responses best addresses their concern?

- A. "Your father's survival beyond the initial estimate is actually quite common. The six-month prognosis is a clinical estimate based on the typical course of his disease — it is not a deadline. Many patients survive longer than expected, and this does not mean the diagnosis was wrong or that he doesn't qualify for hospice. As long as his clinical trajectory supports the prognosis, he can continue receiving hospice services."
- B. "He has survived too long and will need to be discharged from hospice."
- C. "His survival means the original prognosis was incorrect and his cancer may be curable."
- D. "We need to discontinue his pain medications to see whether his disease is truly progressing."

176. A 58-year-old woman with metastatic breast cancer develops new severe back pain with progressive bilateral lower extremity weakness over 72 hours. She now has bilateral leg weakness (3/5 strength), a sensory level at T8, and urinary retention. MRI reveals a single epidural metastasis at T7 with significant cord compression. She has received dexamethasone 16 mg IV. Her ECOG before onset was 1 and her expected survival is approximately 8 months. Based on the Patchell trial evidence, the most appropriate definitive treatment is which of the following?

- A. Radiation therapy alone (30 Gy in 10 fractions) because all MSSC is treated with radiation
- B. High-dose corticosteroids alone as definitive management
- C. Comfort measures only because her neurologic function has already declined

D. Surgical decompression followed by postoperative radiation, which demonstrated superior outcomes to radiation alone in patients with single-level compression, good performance status, and expected survival of at least 3 months

177. A 71-year-old man with advanced prostate cancer on hospice has been managed with opioids for bone pain. He develops new-onset confusion, hallucinations, and myoclonic jerks. His morphine dose has been stable for weeks, but his laboratory work shows his creatinine has risen from 1.0 to 3.8 mg/dL over the past two weeks. The most appropriate opioid management strategy is which of the following?

- A. Continue the current morphine dose with close observation only
- B. Rotate to fentanyl, which has no active metabolites that accumulate in renal impairment — morphine's active metabolite M6G is renally excreted and accumulates in renal failure, causing the neurotoxicity this patient is experiencing
- C. Increase the morphine dose because his symptoms represent tolerance requiring dose escalation
- D. Add naloxone to reverse the accumulated metabolites while continuing morphine

178. A palliative care team is conducting a family meeting for a 68-year-old woman with metastatic ovarian cancer in the ICU. She is intubated and on vasopressors for septic shock. She has no advance directive. Her husband and three adult children are present. Before delivering the medical update, the palliative care physician asks the family, "Can you tell me your understanding of what's been happening with your mother's health over the past few days?" This question represents which communication principle?

- A. Assessing the family's current understanding before providing new information — the "Perception" step of the SPIKES protocol applied to family meetings, which reveals gaps in understanding, identifies misconceptions, and provides a starting point for the medical update
- B. Testing the family's medical knowledge to determine their education level
- C. Shifting responsibility for the clinical update to the family members
- D. Determining whether the family is emotionally prepared to receive bad news

179. A 62-year-old woman with end-stage liver disease has been on hospice for two months. She has refractory hepatic encephalopathy managed with lactulose and rifaximin. Over the past week, she has become more confused and agitated. Her ammonia level is elevated despite adherence to her bowel regimen. The hospice physician considers whether protein restriction would help control her

encephalopathy. Based on current evidence, which of the following statements about dietary protein restriction in hepatic encephalopathy is most accurate?

- A. Strict protein restriction is the cornerstone of encephalopathy management and should be implemented aggressively
- B. Moderate protein restriction (0.5 g/kg/day) is recommended for all patients with hepatic encephalopathy
- C. Current evidence does NOT support routine protein restriction for hepatic encephalopathy — protein restriction worsens sarcopenia and malnutrition without improving encephalopathy outcomes, and adequate protein intake (1.2–1.5 g/kg/day) is now recommended
- D. Protein intake is irrelevant to hepatic encephalopathy and has no effect on ammonia levels

180. A 70-year-old man with advanced COPD on hospice has been having increasing difficulty breathing despite morphine titration. He is on morphine SR 30 mg every 12 hours with morphine IR 10 mg every 4 hours PRN. He uses 4–5 breakthrough doses per day. His oxygen saturation is 88% on his baseline 2 L/min nasal cannula. Based on current evidence, which of the following non-pharmacologic interventions has the strongest evidence for reducing his subjective dyspnea?

- A. Increasing his supplemental oxygen to 4 L/min by nasal cannula to improve his saturation
- B. Humidified ambient air delivered through a bedside humidifier
- C. Aromatherapy with eucalyptus essential oil diffused in his room
- D. A handheld fan directed at his face, which stimulates trigeminal nerve afferents in the nasal mucosa and cheeks and has demonstrated efficacy equivalent to supplemental oxygen in reducing subjective dyspnea

181. A 63-year-old woman with metastatic breast cancer has been on stable opioid therapy for pain. She is also taking sertraline 100 mg daily for depression. Her depression has improved with sertraline, but she continues to have significant insomnia and poor appetite. Her prognosis is approximately 3 months. Her palliative care physician considers switching her antidepressant to one that might also address her insomnia and appetite. Which of the following agents would be most appropriate?

- A. Mirtazapine 15 mg at bedtime, which provides antidepressant efficacy while also promoting sleep (through antihistamine activity) and appetite stimulation (through 5-HT_{2C} and H₁ antagonism) — addressing all three symptoms with one medication

- B. Fluoxetine 20 mg in the morning, which has activating properties that may worsen insomnia
- C. Bupropion 150 mg daily, which has stimulating effects that may improve energy but worsen insomnia
- D. Venlafaxine 75 mg daily, which has alerting properties that are better suited for daytime dosing

182. A 56-year-old man with advanced esophageal cancer is enrolled in hospice. He develops new-onset stridor and severe dyspnea from progressive tumor encroachment on the trachea. He is on comfort measures only with a DNR order. He is alert and terrified. Which of the following represents the most appropriate immediate management?

- A. Call 911 for emergency intubation to secure the airway
- B. Administer morphine for dyspnea and midazolam for anxiety, position the patient upright, consider heliox (helium-oxygen mixture) if available to reduce turbulent airflow, and reassess — if the obstruction is complete and irreversible, initiate proportional palliative sedation
- C. Withhold all interventions because the patient is on comfort measures and the airway obstruction is the terminal event
- D. Perform an emergency tracheostomy at the bedside to bypass the obstruction

183. A hospice medical director is reviewing quality metrics for the program. The data show that 42% of patients died within 7 days of hospice enrollment, and the median length of stay is 11 days. These metrics most strongly indicate which of the following quality concerns?

- A. The hospice program is enrolling patients too early and providing unnecessary services
- B. The hospice program is providing suboptimal symptom management leading to premature death
- C. The hospice program has excellent referral patterns and is capturing patients at the appropriate time
- D. Late referrals to hospice are denying patients and families the full benefit of hospice services — including symptom management, psychosocial support, spiritual care, caregiver preparation, and bereavement planning

184. A 67-year-old woman with advanced pancreatic cancer has been on hospice for six weeks. She develops severe right upper quadrant pain from rapidly enlarging hepatic metastases causing hepatic capsule distension. Her current opioid provides partial relief. The palliative care physician wants to add a non-opioid medication that specifically targets the mechanism of hepatic capsule pain. Which of the following is the most appropriate addition?

- A. Gabapentin 300 mg three times daily for neuropathic pain modulation
- B. Ketorolac 15 mg IV every 6 hours for direct anti-inflammatory effect at the capsule
- C. Dexamethasone 8 mg daily to reduce hepatic inflammation and peritumoral edema, directly decreasing capsular stretch
- D. Acetaminophen 1000 mg every 6 hours for general analgesic augmentation

185. A 74-year-old man with end-stage heart failure is dying at home on hospice. He has been unresponsive for six hours. His wife asks the hospice nurse, "Is he in pain? He sometimes grimaces when we turn him." Which of the following is the most appropriate response and clinical action?

- A. Administer a pre-emptive morphine dose before repositioning and monitor for improvement in grimacing — even in unresponsive patients, grimacing during care may indicate pain, and treating possible pain is always preferable to allowing potential suffering
- B. Reassure the wife that all grimacing in unresponsive patients is reflexive and does not require treatment
- C. Order a PAINAD assessment but defer treatment until the score reaches a specific threshold
- D. Discontinue all repositioning to avoid causing any further discomfort

186. A 60-year-old man with advanced colon cancer is on hospice. He has a colostomy. Over the past three days, his ostomy output has decreased significantly, he has developed abdominal distension and nausea, and his stoma appears dusky in color. The hospice nurse suspects a possible bowel obstruction. The patient's goals are comfort-focused. Which of the following is the most appropriate initial management approach?

- A. Transfer to the hospital for emergency surgery to relieve the obstruction
- B. Initiate medical management of the suspected obstruction with octreotide to reduce GI secretion volume, glycopyrrolate to reduce secretions and colicky pain, dexamethasone to reduce peritumoral edema, and parenteral opioids for pain — consistent with the inoperable MBO management approach
- C. Administer metoclopramide 10 mg IV every 6 hours for prokinetic effect to relieve the obstruction
- D. Prescribe a high-fiber diet and increased fluid intake to promote bowel motility

187. A 72-year-old woman with metastatic breast cancer and known brain metastases is on dexamethasone 4 mg daily. She has been seizure-free. Her oncologist asks the palliative care team

whether prophylactic anticonvulsant therapy should be started. Based on current evidence, which of the following is the most accurate recommendation?

- A. Prophylactic phenytoin is recommended for all patients with brain metastases to prevent first seizure
- B. Prophylactic valproic acid provides neuroprotective benefit in patients on corticosteroids
- C. All patients with brain metastases should receive at least 6 months of prophylactic levetiracetam
- D. Prophylactic anticonvulsants are NOT recommended for patients with brain metastases who have not had seizures — randomized trials have not demonstrated a reduction in seizure incidence, and the medications carry significant side effect risks

188. A 65-year-old man with advanced COPD on hospice develops an acute exacerbation with severe dyspnea. The hospice nurse administers morphine 5 mg SC per protocol. Thirty minutes later, the patient remains severely dyspneic, with respiratory rate of 30, accessory muscle use, and significant anxiety. He is on comfort measures only. What is the most appropriate next step?

- A. Repeat the morphine dose and consider adding midazolam for the anxiety component — if dyspnea persists despite initial opioid, the addition of a benzodiazepine addresses the anxiety-breathlessness cycle that opioid alone may not fully control
- B. Withhold additional medications and observe for another 60 minutes before reassessing
- C. Administer nebulized albuterol as the sole intervention for acute COPD exacerbation
- D. Transfer to the hospital for BiPAP support despite the comfort measures only plan

189. A 56-year-old woman with stage IV ovarian cancer has been on hospice for three months. She develops new severe pelvic pain rated 9/10 that is deep, constant, and poorly localized. She describes it as "cramping" and "squeezing." She also reports nausea and diaphoresis. Her current opioid provides only partial relief. Based on the pain characteristics, this pain is best classified as which type?

- A. Visceral nociceptive pain — deep, poorly localized, cramping quality with autonomic features (nausea, diaphoresis), arising from pelvic visceral structures
- B. Somatic nociceptive pain — well-localized and sharp, arising from the abdominal wall
- C. Neuropathic pain — burning and shooting, arising from sacral nerve root compression
- D. Opioid-induced hyperalgesia — diffuse, widespread pain worsened by opioid dose escalation

190. A hospice social worker is conducting a bereavement follow-up with the 45-year-old son of a patient who died two months ago. The son reports that he has returned to work, is sleeping reasonably well, and is functioning adequately in most areas. However, he says, "I still cry every day. Sometimes it hits me out of nowhere — I'll be driving and suddenly I'm sobbing. Is this normal?" Which of the following is the most appropriate response?

- A. "Daily crying at two months is excessive. I'd like to refer you for psychiatric evaluation."
- B. "What you're describing is completely normal. Grief often comes in waves that can catch you off guard. Crying every day at two months does not mean something is wrong — it means you loved your father deeply. There is no timeline for grief."
- C. "You should be feeling better by now. Two months is usually enough time for acute grief to resolve."
- D. "The sudden episodes of crying suggest a panic disorder that requires medication."

191. A 69-year-old man with advanced pancreatic cancer on hospice develops new-onset diabetes from both his cancer and dexamethasone therapy. His fasting blood glucose is consistently above 350 mg/dL. He is symptomatic with polyuria causing frequent nighttime awakenings, excessive thirst disrupting his comfort, and blurred vision impairing his ability to watch television — his primary source of enjoyment. His hospice physician considers insulin therapy. Which of the following best supports the rationale for treating his hyperglycemia?

- A. Strict glucose control (HbA1c less than 7%) is essential for preventing long-term microvascular complications
- B. Insulin is contraindicated in hospice patients because it is a disease-directed therapy
- C. Blood glucose monitoring is not permitted under the hospice benefit
- D. Treatment of his hyperglycemia is warranted not for long-term glucose control but for symptom relief — his polyuria, excessive thirst, and blurred vision are directly caused by hyperglycemia and are significantly impairing his comfort and quality of life

192. A 73-year-old woman with end-stage heart failure on hospice has been declining over the past week. She is now bedbound and minimally responsive. Her daughter reports that yesterday, her mother suddenly became alert, asked for her favorite meal, engaged in conversation with family, and expressed love and gratitude. Today she has returned to her prior unresponsive state. The daughter asks, "What happened? Is she getting better?" Which of the following is the most accurate and compassionate explanation?

- A. "She may have had a transient ischemic attack that temporarily improved her neurologic function."

B. "This was likely caused by an accidental overdose of her stimulant medication."

C. "What you witnessed is called a terminal rally — a period of unexpected alertness and engagement that can occur in the final days before death. It is poorly understood but is recognized by clinicians as a real phenomenon. It does not indicate recovery. It may have been a gift — a chance for your family to connect one more time."

D. "Her improvement means her heart failure may be reversing, and we should consider transferring her to the hospital."

193. A palliative care physician is completing a death certificate for a 71-year-old man who died of complications of advanced Parkinson's disease. The immediate cause of death was aspiration pneumonia, which resulted from severe dysphagia caused by the Parkinson's disease. Which of the following Part I cause-of-death sequences is correctly formatted?

A. Line a: "Aspiration pneumonia" — Line b: "Dysphagia" — Line c: "Parkinson's disease"

B. Line a: "Cardiac arrest" — Line b: "Old age"

C. Line a: "Parkinson's disease" (with no additional lines)

D. Line a: "Natural causes" — Line b: "Aspiration"

194. A 55-year-old woman with advanced sarcoma is on hospice. She has been experiencing severe cancer-related fatigue that significantly limits her daily activities. She sleeps 14 hours per day but wakes unrefreshed. Her hemoglobin is 11.2 g/dL, thyroid function is normal, and her depression screening is negative. Non-pharmacologic measures (activity pacing, sleep hygiene) have been implemented. She asks about medication options. Which of the following has the strongest evidence for cancer-related fatigue?

A. Modafinil 100 mg daily for wakefulness promotion with alerting properties

B. Methylphenidate 5 mg in the morning and at noon, titrated based on response — a CNS stimulant with rapid onset (hours) that improves alertness, concentration, and energy in cancer-related fatigue

C. Dexamethasone 4 mg daily for short-term energy and well-being improvement

D. Erythropoiesis-stimulating agent to correct her mild anemia as the probable cause of her fatigue

195. A 62-year-old man with advanced hepatocellular carcinoma on hospice has refractory ascites from a combination of portal hypertension and peritoneal carcinomatosis. He has an indwelling peritoneal catheter and drains 1.5 liters every other day. He asks about the long-term outlook for his ascites

management. Which of the following potential complications of the indwelling catheter is most important to educate him about?

- A. Catheter-related arterial hemorrhage from erosion into abdominal wall vessels
- B. Development of new peritoneal metastases seeded from the catheter tract
- C. Spontaneous catheter expulsion requiring surgical reimplantation
- D. Peritonitis from bacterial contamination — he and his family should be educated about strict sterile technique during drainage, recognition of infection signs (fever, abdominal pain, cloudy drainage), and the importance of reporting these symptoms immediately

196. A 71-year-old woman with metastatic colorectal cancer is on hospice. She has been on a stable opioid regimen for four months. She asks her hospice physician, "If I take this morphine much longer, will my body get used to it and it won't work anymore?" Which of the following best addresses her concern about opioid tolerance?

- A. "Tolerance is a myth — opioids maintain the same effect indefinitely at the same dose."
- B. "Tolerance means addiction, and you should be concerned about taking opioids long-term."
- C. "Tolerance — the need for higher doses to achieve the same effect — does develop with chronic opioid use, but in most cancer patients, dose increases are needed primarily because the disease is progressing and causing more pain, not because of pharmacologic tolerance alone. We can always adjust your dose to maintain comfort."
- D. "You will definitely become tolerant and the medication will stop working completely."

197. A 64-year-old man with advanced lung cancer on hospice is being visited by the hospice chaplain. He tells the chaplain, "I don't believe in God and I never have. I don't need spiritual care." Which of the following is the most appropriate response by the chaplain?

- A. "Spiritual care isn't only about God or religion — it can also address questions of meaning, purpose, legacy, and how you want to spend your remaining time. I'm here to support whatever is important to you, not to impose any beliefs. Would it be helpful to talk about what gives your life meaning?"
- B. "I'll note in your chart that you declined spiritual care and won't visit again."
- C. "Everyone needs spiritual care at the end of life, even if they don't realize it. Let me explain why."
- D. "Perhaps you should reconsider your beliefs given your current situation."

198. A 59-year-old man with advanced gastric cancer is on hospice. He has been comfortable on his current opioid regimen. His wife calls the hospice nurse to report that he has become increasingly confused, is picking at his bedclothes, and attempted to climb out of bed twice in the past hour. He was alert and oriented yesterday. His temperature is 37.1°C and his vital signs are otherwise stable. The hospice nurse should immediately consider which of the following as the most important first step in managing his acute change in mental status?

- A. Administer haloperidol 2 mg SC immediately for terminal agitation without further assessment
- B. Review his medication list for potential contributing factors — opioids, benzodiazepines, anticholinergics, and corticosteroids are the most common medication causes of delirium in palliative care, and medication review is the single most important first step in delirium management
- C. Initiate proportional palliative sedation with midazolam for refractory agitation
- D. Accept the delirium as a sign of the dying process and provide comfort measures only without attempting to identify reversible causes

199. A 72-year-old man with advanced prostate cancer on hospice has bone metastases causing pain rated 6/10. He is currently taking oxycodone 10 mg every 6 hours. He has been on this regimen for one week. His pain is partially controlled but he asks about adding a non-opioid specifically for his bone pain. Which of the following non-opioid agents is most specifically effective for bone metastasis pain?

- A. Acetaminophen 1000 mg every 6 hours for general analgesic augmentation
- B. Gabapentin 300 mg three times daily for neuropathic bone pain modulation
- C. Duloxetine 60 mg daily for its dual analgesic and antidepressant properties
- D. An NSAID such as ibuprofen 600 mg three times daily or celecoxib 200 mg daily, which inhibits prostaglandin synthesis at the site of bony metastatic involvement — prostaglandins produced by bone metastases sensitize nociceptors and drive bone pain specifically

200. A 66-year-old man with end-stage liver disease on hospice develops severe pruritus from cholestasis. Cholestyramine was intolerable due to constipation and taste. Rifampin was tried but showed no improvement after three weeks. The palliative care physician considers sertraline. Which of the following best explains the rationale for using sertraline in cholestatic pruritus?

- A. Sertraline's antidepressant effect improves the patient's mood, which reduces subjective perception of pruritus
- B. Sertraline has direct antihistamine activity that blocks peripheral itch receptors in the skin
- C. Sertraline modulates central serotonergic pathways involved in cholestatic pruritus — serotonin plays a role in central itch processing, and SSRIs have demonstrated efficacy for cholestatic pruritus through this central mechanism
- D. Sertraline stimulates bile flow through direct choleric activity, reducing bile salt deposition in the skin

201. A hospice nurse is visiting a 78-year-old man with end-stage heart failure at home. His wife reports that he has not urinated in 14 hours. On examination, the patient is obtunded, has mottled extremities extending to the mid-thighs, cool hands and feet, and no palpable radial pulse. His breathing is irregular with apneic pauses of 15–20 seconds. These findings, taken together, indicate which of the following?

- A. Active dying with death likely within hours — the combination of anuria, mottling above the knees, loss of peripheral pulses, obtundation, and irregular breathing represents the convergence of multiple end-of-life signs
- B. A reversible fluid deficit requiring aggressive IV hydration to restore urine output
- C. Acute kidney injury from renal artery thrombosis requiring emergency intervention
- D. Hypothermia from inadequate room temperature requiring warming measures

202. A 55-year-old man with advanced melanoma is enrolled in a clinical trial for a new immunotherapy agent. He develops worsening cancer-related pain. His oncologist is managing his cancer therapy but has limited expertise in complex pain management. Which of the following statements about palliative care involvement during clinical trial participation is most accurate?

- A. Palliative care consultation is prohibited during active clinical trial enrollment
- B. Palliative care consultation is appropriate and should be offered concurrently with clinical trial participation — palliative care's focus on symptom management and quality of life complements and supports the goals of clinical research
- C. Palliative care can only be consulted if the patient is removed from the clinical trial
- D. Clinical trial protocols universally include comprehensive palliative care components, making separate consultation unnecessary

203. A 70-year-old man with advanced COPD on hospice at home develops acute respiratory distress. The hospice nurse administers morphine and midazolam per protocol. Despite these interventions, the patient remains severely distressed with air hunger. He is on comfort measures only. The nurse contacts the hospice physician, who considers initiating continuous sedation. Before initiating proportional palliative sedation, which of the following prerequisites must be met?

- A. The patient must sign a written consent form specifically for palliative sedation
- B. A court order must be obtained authorizing sedation because it may hasten death
- C. The patient's attending oncologist must approve the sedation in writing
- D. The symptom must be confirmed as refractory (standard treatments have been optimized), the patient must be imminently dying, goals of care must be aligned with the patient/family, and the decision must be documented — palliative sedation is the intervention of last resort for truly refractory suffering

204. A 68-year-old woman with metastatic ovarian cancer develops new-onset bilateral lower extremity weakness, saddle anesthesia, and urinary retention over 48 hours. MRI reveals an epidural mass at L3 compressing the cauda equina. Dexamethasone 16 mg IV has been administered. Based on MSCC evidence, the single most important prognostic factor that will determine her neurologic outcome is which of the following?

- A. The histology of her ovarian cancer and its expected radiosensitivity
- B. The radiation fractionation schedule selected by the radiation oncologist
- C. Her neurologic status at the time treatment is initiated — patients who are still ambulatory have greater than 80% chance of remaining ambulatory, while patients who are paraplegic have less than 10% chance of regaining function
- D. Her age, which is the primary determinant of neurologic recovery from spinal cord compression

205. A 71-year-old man with advanced heart failure and an ICD is being enrolled in hospice. The hospice physician discusses ICD management. The patient says, "I definitely don't want to be shocked anymore. But what about the pacemaker part? I have a heart block and my heart would go very slow without it." Which of the following is the most accurate guidance about managing the pacing function?

- A. The ICD shock function and pacing function must be deactivated simultaneously — they cannot be separated
- B. Pacemaker deactivation is considered euthanasia and is legally prohibited
- C. The pacing function must be deactivated at hospice enrollment per Medicare regulations

D. The shock function can be deactivated independently while maintaining the pacing function — this is a routine capability of modern ICDs and the most commonly employed approach, preserving pacing that prevents symptomatic bradycardia while eliminating painful shocks

206. A 62-year-old woman with advanced breast cancer has been on opioid therapy for bone pain. She is taking morphine sustained-release 60 mg every 12 hours. She develops new nausea that began two days ago. The nausea is constant, unrelated to meals, and not positional. She has been on morphine for three weeks. The most likely mechanism and appropriate management are which of the following?

- A. The nausea will persist indefinitely and requires permanent antiemetic therapy
- B. Opioid-induced nausea mediated by stimulation of the chemoreceptor trigger zone — tolerance to this effect typically develops within 3–7 days of continued use, so a short course of haloperidol 0.5–1 mg every 8 hours for the next 5–7 days should be sufficient
- C. The nausea indicates an allergic reaction to morphine requiring immediate discontinuation
- D. Gastroparesis from morphine-induced delayed gastric emptying requiring metoclopramide indefinitely

207. A 74-year-old man with end-stage COPD on hospice has been comfortable on morphine for dyspnea. He develops new bilateral lower extremity edema, JVD, and worsening dyspnea. His hospice physician diagnoses right heart failure with fluid overload as the cause of his worsening symptoms. She adds furosemide 40 mg daily. The hospice pharmacy questions whether a diuretic is appropriate for a hospice patient. Which of the following is the most appropriate rationale for the physician to provide?

- A. Furosemide is being prescribed as a comfort medication — it directly relieves the dyspnea caused by pulmonary congestion from fluid overload, making it a symptom-directed intervention consistent with the hospice plan of care
- B. Furosemide cannot be prescribed under the hospice benefit because it is classified as a cardiac medication
- C. The physician does not need to justify medication decisions to the pharmacy
- D. Furosemide should be replaced with morphine alone because opioids are the only appropriate dyspnea treatment in hospice

208. A 57-year-old woman with advanced cervical cancer on hospice has been experiencing escalating pelvic pain from tumor invasion of the sacral nerve roots. She describes the pain as burning, shooting,

and electric-shock-like, with associated numbness in her perineum. Her current opioid provides partial relief. Based on the neuropathic quality of her pain, which of the following adjuvant analgesic classes should be added?

- A. An NSAID for anti-inflammatory bone pain relief
- B. An acetaminophen-opioid combination product for additive analgesic effect
- C. A gabapentinoid (gabapentin or pregabalin) or an SNRI (duloxetine) — the first-line adjuvant analgesic classes for neuropathic pain, which target the specific mechanism producing her burning, shooting symptoms
- D. A muscle relaxant for the spasm component of her pain

209. A palliative care physician has been treating a 64-year-old woman with advanced lung cancer for the past six months. The patient dies peacefully at home on hospice. At the next interdisciplinary team meeting, the physician notices that one of the hospice nurses who was particularly close to this patient appears withdrawn, tearful, and states, "I don't know why this one is hitting me so hard." The most appropriate response by the team is which of the following?

- A. Acknowledge the nurse's grief as a normal response to the loss of a patient she cared about, normalize the experience, and offer support — including debriefing time, access to employee assistance programs, and the reassurance that grieving patients is not a weakness but a sign of meaningful engagement
- B. Recommend that the nurse take a leave of absence because emotional reactions indicate she is not suitable for hospice work
- C. Tell the nurse to "leave it at the door" because professional boundaries require emotional detachment from patients
- D. Refer the nurse for mandatory psychiatric evaluation to assess for clinical depression

210. A 69-year-old man with advanced prostate cancer on hospice has diffuse bone metastases. He has been on opioid therapy with NSAIDs and gabapentin for mixed nociceptive and neuropathic pain. His palliative care physician recommends adding a bone-targeted agent to reduce skeletal-related events and potentially reduce bone pain. Which of the following agents acts through RANKL inhibition to block osteoclast-mediated bone resorption?

- A. Zoledronic acid, which is a bisphosphonate that inhibits osteoclasts through a different mechanism

- B. Denosumab, which is a monoclonal antibody that blocks RANKL (receptor activator of nuclear factor kappa-B ligand), preventing osteoclast differentiation and activation
- C. Calcitonin, which directly inhibits osteoclast activity through calcitonin receptor activation
- D. Pamidronate, which is a bisphosphonate administered intravenously every 3–4 weeks

211. A 73-year-old woman with advanced heart failure on hospice has been declining. Over the past 48 hours, her urine output has dropped to less than 100 mL per day. She is bedbound and minimally responsive. Her mottling extends to her mid-thighs. Her breathing has become irregular with periods of apnea. The hospice nurse recognizes these as signs of imminent death. Which of the following is the most important action at this point?

- A. Increase her furosemide dose aggressively to improve urine output
- B. Start IV fluids to reverse the dehydration causing her decreased urine output
- C. Transfer her to the hospital for evaluation of acute kidney injury
- D. Communicate clearly with the family that death is likely within hours to a few days, ensure all comfort measures are optimized, facilitate family presence, and provide emotional and spiritual support

212. A 60-year-old man with advanced colon cancer on hospice develops sudden, massive rectal hemorrhage — bright red blood filling the bed within minutes. He is on comfort measures with a DNR order. He is conscious and terrified. His wife is screaming. The hospice comfort kit is at the bedside. What is the single most important immediate intervention?

- A. Apply direct pressure to the rectal area to achieve mechanical hemostasis
- B. Administer IV fluids to maintain hemodynamic stability
- C. Administer midazolam from the comfort kit for rapid sedation to eliminate the patient's conscious terror — in catastrophic hemorrhage in a comfort-focused patient, preventing the patient from experiencing conscious horror is the highest priority
- D. Call 911 for emergency surgical intervention

213. A palliative care physician is meeting with the family of a 76-year-old man with end-stage heart failure in the ICU. The medical team has recommended withdrawing mechanical ventilation. The family agrees but asks, "How long will it take after you turn off the machine?" Based on this patient's clinical

parameters (hemodynamically unstable on vasopressors, minimal spontaneous respiratory effort, FiO₂ 100%), which of the following is the most honest and appropriate answer?

- A. "Given his current condition — he requires high levels of support and has very little independent breathing effort — I expect death to occur within minutes to hours after we remove the ventilator. However, I cannot predict the exact time. We will keep him comfortable throughout, and we will be here with you."
- B. "He will die within exactly 5 minutes after extubation."
- C. "He will likely survive for several days because the body has significant reserves."
- D. "I cannot give you any estimation at all — it is impossible to predict."

214. A hospice interdisciplinary team is reviewing the care of a 68-year-old woman with advanced ovarian cancer. The bereavement coordinator reports that the patient's husband, who is 72 years old and was the primary caregiver, has multiple risk factors for complicated bereavement: he has a history of depression, he was highly dependent on his wife for emotional support, and he has limited social connections since their recent move to a new city. Based on this risk assessment, which level of bereavement support is most appropriate?

- A. Standard hospice bereavement follow-up (phone calls at 1, 3, 6, and 12 months) is sufficient for all bereaved family members
- B. Enhanced, proactive bereavement support — more frequent contacts, early connection with counseling resources, monitoring for development of complicated grief or depression, and referral for individual therapy if symptoms emerge
- C. No bereavement support is needed because the husband is not the patient
- D. Bereavement support should be delayed until 12 months post-death, when prolonged grief disorder can be formally diagnosed

215. A 55-year-old man with advanced melanoma on immunotherapy develops new-onset fatigue, constipation, cold intolerance, and dry skin. His TSH is 62 mIU/L (markedly elevated) and his free T₄ is undetectable. This represents which of the following immunotherapy complications, and what is the appropriate management?

- A. Immune-related myositis requiring high-dose corticosteroids and immunotherapy discontinuation
- B. Adrenal insufficiency from immune-related hypophysitis requiring hydrocortisone replacement

- C. Immune-related pneumonitis with atypical presentation requiring bronchoscopy for diagnosis
- D. Immune-related thyroiditis progressing to hypothyroidism — managed with levothyroxine replacement, which does not necessarily require immunotherapy discontinuation

216. A 70-year-old woman with advanced breast cancer on hospice has been experiencing progressive dysphagia. She can no longer swallow tablets but can still take small amounts of liquid. Her current medications include morphine SR 30 mg every 12 hours, gabapentin 300 mg TID, dexamethasone 4 mg daily, and senna 2 tablets at bedtime. Which of the following medication management strategies is most appropriate?

- A. Discontinue all medications because she can no longer swallow tablets
- B. Crush all tablets including the morphine SR and mix with water for oral administration
- C. Convert morphine SR to concentrated oral morphine solution (which can be administered in small volumes), convert gabapentin to liquid formulation, convert dexamethasone to an injectable form given subcutaneously, and convert senna to a liquid or suppository form
- D. Insert a nasogastric tube for all medication administration

217. A 63-year-old man with advanced gastric cancer is being seen in the palliative care clinic. He asks, "My neighbor had stomach cancer and lived two years after diagnosis. Why can't you tell me I'll live that long?" Which communication principle should guide the physician's response to this question about individual prognosis?

- A. "Every person's cancer is different, and comparing your situation to your neighbor's may not be helpful. What I can tell you is what I'm seeing with your specific disease and what the typical course looks like. I'd rather be honest with you about what to expect so we can plan together. Would it be helpful to talk about that?"
- B. "Your neighbor probably had a less aggressive cancer type. You should not compare yourself to others."
- C. "I can't tell you anything about how long you'll live because medicine cannot predict the future."
- D. "You're right — you could live two years. Let's plan for that."

218. A 72-year-old man with end-stage COPD on hospice has been having progressive difficulty swallowing his oral medications. He is currently taking morphine SR 60 mg every 12 hours (total 120 mg/day oral morphine). His hospice physician plans to convert to a continuous subcutaneous morphine

infusion. Using the standard 3:1 oral-to-parenteral ratio for morphine, what is the correct continuous SC infusion rate?

- A. 120 mg SC per day (5 mg/hour) — the same total daily dose without conversion
- B. 40 mg SC per day (approximately 1.7 mg/hour) — applying the 3:1 oral-to-parenteral ratio
- C. 20 mg SC per day (approximately 0.8 mg/hour) — applying an additional 50% safety reduction
- D. 60 mg SC per day (2.5 mg/hour) — using a 2:1 conversion ratio

219. A 65-year-old woman with metastatic pancreatic cancer is on hospice. She develops severe constipation despite taking senna 4 tablets BID and polyethylene glycol 17 g daily. She has not had a bowel movement in 8 days. A rectal examination shows no impaction. Her abdominal exam reveals distension but no signs of obstruction. She is on morphine for pain. Which of the following is the most appropriate next step in managing her refractory opioid-induced constipation?

- A. Perform a barium enema to evaluate for colonic pathology
- B. Discontinue all opioids and switch to a non-opioid pain management strategy
- C. Add a bulking agent (psyllium) with increased fluid intake as the next step
- D. Start a peripherally acting mu opioid receptor antagonist (PAMORA) such as methylnaltrexone 12 mg SC, which blocks mu receptors in the GI tract without crossing the blood-brain barrier and without reversing analgesia

220. A 74-year-old man with advanced prostate cancer on hospice develops a new pathologic fracture of his right proximal humerus after minimal trauma. He has severe pain and cannot move his right arm. His ECOG performance status before the fracture was 2, and his expected survival is approximately 4 months. Which of the following represents the most appropriate management approach for this pathologic fracture?

- A. Conservative management with a sling and increased opioids as definitive treatment
- B. Palliative radiation alone to the fracture site without surgical intervention
- C. Surgical fixation (intramedullary nailing) followed by palliative radiation to prevent tumor regrowth — appropriate given his adequate performance status and months of expected survival
- D. Amputation of the arm to eliminate the pain source

221. A palliative care team is debriefing after a challenging case in which a young mother died despite aggressive symptom management efforts. A nurse on the team states, "I knew we should have started the sedation earlier, but the attending wanted to try one more medication change first. I felt like my hands were tied." This experience is best described as which of the following?

- A. Moral distress — the nurse knew what she believed was the right course of action but felt unable to carry it out due to hierarchical barriers, causing anguish, frustration, and a sense of powerlessness
- B. Compassion fatigue from empathic engagement with the patient's suffering
- C. Professional burnout from excessive workload and administrative burden
- D. Normal job dissatisfaction that will resolve spontaneously without intervention

222. A 68-year-old man with advanced lung cancer is being transferred from the hospital to home hospice. His current IV medications include hydromorphone 0.5 mg/hour (12 mg/24 hours IV), dexamethasone 4 mg IV every 12 hours, and ondansetron 4 mg IV every 8 hours. The discharge team is converting his medications to oral formulations. Using the standard equianalgesic conversion for hydromorphone (parenteral 1.5 mg = oral 7.5 mg), what is the correct total 24-hour oral hydromorphone dose?

- A. 12 mg oral hydromorphone per day (same number as the IV dose)
- B. 60 mg oral hydromorphone per day (using the 5:1 parenteral-to-oral ratio for hydromorphone)
- C. 24 mg oral hydromorphone per day (doubling the IV dose)
- D. 36 mg oral hydromorphone per day (using a 3:1 ratio)

223. A 59-year-old woman with advanced breast cancer on hospice asks her hospice nurse, "Can I still go to my grandson's graduation next week? I feel like I should just stay home." The nurse's most appropriate response reflects which core principle of palliative care?

- A. "It's too risky for you to travel. You should stay home where we can manage your symptoms safely."
- B. "You should only go if your doctor gives you medical clearance."
- C. "That is not recommended because it would be inconsistent with your hospice enrollment."
- D. "Absolutely — if attending your grandson's graduation is important to you, let's work together to make it happen. We can plan your medication schedule, arrange for any equipment you might need, and make sure you're comfortable for the trip. Living fully while on hospice is what this is all about."

224. A 72-year-old man with end-stage heart failure on hospice has been managed with furosemide for dyspnea. Over the past two days, his dyspnea has improved but he has developed new confusion and muscle cramps. His serum sodium is 126 mEq/L and potassium is 2.8 mEq/L. These laboratory abnormalities are most likely caused by which of the following?

- A. Progression of his heart failure causing dilutional hyponatremia
- B. Hepatic encephalopathy from previously undiagnosed liver disease
- C. Diuretic-induced electrolyte derangements — furosemide causes renal sodium and potassium wasting, which can produce hyponatremia and hypokalemia manifesting as confusion and muscle cramps
- D. Morphine toxicity causing SIADH and secondary electrolyte abnormalities

225. A 70-year-old man with advanced colon cancer on hospice has been having recurring discussions with his hospice chaplain about his fears of dying. He does not identify with any religious tradition but tells the chaplain, "I keep asking myself — what was the point of my life? Did any of it matter?" This existential questioning is best addressed through which of the following interventions?

- A. Prescribing an anxiolytic to reduce his existential anxiety pharmacologically
- B. Referral to psychiatry for evaluation of existential depression requiring antidepressant therapy
- C. Dismissing his concerns as philosophical rumination that has no clinical significance
- D. Continued spiritual care from the chaplain — exploring his questions about meaning, purpose, and legacy through narrative life review, dignity therapy, and facilitation of meaningful connections — these are interventions specifically designed to address existential suffering at the end of life

226. A 64-year-old woman with advanced pancreatic cancer enrolled in hospice develops acute abdominal pain, distension, and vomiting. Clinical evaluation suggests malignant bowel obstruction. She is not a surgical candidate due to extensive peritoneal carcinomatosis. The hospice team initiates medical management. Which of the following medication combinations represents the standard medical management approach for inoperable MBO?

- A. Metoclopramide for prokinetic effect plus high-dose oral laxatives for bowel stimulation
- B. Octreotide (to reduce GI secretion volume) plus anticholinergics (glycopyrrolate or hyoscine to reduce secretions and colicky pain) plus dexamethasone (to reduce peritumoral edema) plus parenteral opioids (for pain management)
- C. Broad-spectrum antibiotics for presumed infectious etiology plus IV fluids for hydration

D. Total parenteral nutrition as the primary intervention to maintain nutritional status

227. A 70-year-old man with end-stage COPD on hospice has been having good days and bad days — a pattern his wife has difficulty understanding. She says, "On Monday he was eating lunch and talking. Today he can barely stay awake. How can he be dying if he had a good day two days ago?" Which of the following best explains this pattern to the family?

- A. "The good day means he is recovering, and we should reassess his prognosis."
- B. "The fluctuating pattern is very common in diseases like COPD and heart failure. Think of it like a road that goes downhill overall but has some flat stretches and even small uphill sections along the way. The overall direction hasn't changed, even though some days are better than others. This pattern doesn't mean he is getting better — it's the natural way this type of disease progresses."
- C. "The good days indicate medication side effects that need adjustment."
- D. "Fluctuating patterns always indicate a new infection that needs treatment."

228. A 65-year-old man with advanced hepatocellular carcinoma on hospice requires opioid therapy for pain. He has Child-Pugh C cirrhosis with significant ascites, encephalopathy, and a bilirubin of 14 mg/dL. His GFR is 65 mL/min (normal renal function). The palliative care physician selects morphine at a reduced dose with extended intervals. Which pharmacokinetic consideration most directly explains why the oral morphine dose should be reduced in this patient?

- A. Morphine is renally excreted and his elevated bilirubin interferes with renal clearance
- B. Ascites increases the volume of distribution for all hydrophilic drugs, requiring higher doses
- C. Reduced hepatic first-pass metabolism in severe liver disease increases oral morphine bioavailability — a greater proportion of the oral dose reaches systemic circulation, effectively increasing the patient's drug exposure at any given oral dose
- D. Morphine binds to bilirubin in the bloodstream, creating toxic metabolites that accumulate

229. A hospice bereavement coordinator is meeting with the 55-year-old daughter of a patient who died six months ago. The daughter reports that she has resumed most of her normal activities — working, socializing, and caring for her family. However, she experiences sudden waves of intense grief that can be triggered by unexpected reminders — a song on the radio, finding her mother's handwriting on a recipe card, or smelling her mother's perfume. She asks, "Why does this keep happening when I thought I was doing better?" Which of the following best explains this experience?

- A. "The continuing grief waves indicate that you have developed prolonged grief disorder and need specialized therapy."
- B. "You are not progressing in your grief as expected. Six months should be enough time to resolve these reactions."
- C. "The sudden episodes indicate an anxiety disorder that has developed since your mother's death."
- D. "What you're describing is a completely normal aspect of grief — grief comes in waves, often triggered by sensory reminders, and these waves can occur for months or years after a loss without indicating pathology. The fact that you're functioning well between the waves is a sign of healthy adaptation, not a sign that you should be 'over it' by now."

230. A 71-year-old man with advanced prostate cancer on hospice has been comfortable on his current opioid regimen for three months. At today's visit, he reports that his pain has gradually worsened over the past two weeks despite stable medication use. His corrected serum calcium is 14.5 mg/dL. He also reports increased confusion, severe constipation, and polyuria — symptoms his family attributed to disease progression. Which of the following is the most clinically important implication of the elevated calcium?

- A. The hypercalcemia is incidental and unrelated to his worsening symptoms
- B. The hypercalcemia may be the cause of multiple worsening symptoms (pain, confusion, constipation, polyuria) and represents a potentially reversible source of suffering — treatment (if consistent with goals) could simultaneously improve multiple symptom domains
- C. Hypercalcemia treatment is categorically prohibited in hospice patients
- D. The calcium level is only mildly elevated and does not require attention

231. A 58-year-old woman with advanced ovarian cancer has been on hospice for two months. She asks her hospice physician, "Am I allowed to travel to see my sister in another state? She's sick too and I want to see her before..." She trails off. Which of the following is the most appropriate response?

- A. "Hospice patients are not permitted to leave their home because they must remain available for nursing visits."
- B. "Travel is not recommended because it could worsen your condition."
- C. "You would need to revoke hospice before traveling to another state."
- D. "Yes — you can absolutely travel while on hospice. We can coordinate your care, ensure you have enough medications for the trip, arrange for hospice services in the area you're visiting if needed, and plan for any contingencies. Let's make this happen."

232. A 74-year-old woman with advanced dementia (FAST 7D) is on hospice in a nursing facility. Over the past two days, she has become increasingly agitated — moaning, pulling at her clothes, and attempting to get out of bed. Her vital signs are stable except for a temperature of 37.8°C. Before attributing her agitation to terminal restlessness or the progression of her dementia, which of the following assessments should be performed FIRST?

- A. MRI of the brain to evaluate for new cerebral pathology
- B. Comprehensive metabolic panel and complete blood count to screen for metabolic abnormalities
- C. Assessment for common reversible causes of agitation — check for bladder distension (catheterize if distended), perform a rectal exam for fecal impaction, assess for pain using the PAINAD scale, and review medications for new or dose-changed drugs that could cause delirium
- D. EEG to rule out subclinical seizure activity

233. A 63-year-old man with advanced lung cancer on hospice tells his hospice nurse, "I've been having thoughts about taking all my morphine at once to end things. But I haven't done anything — I just think about it." His pain is rated 4/10 on his current regimen. He denies active suicidal plan or intent beyond the thought. Which of the following is the most appropriate initial response?

- A. Report the patient to law enforcement for expressing suicidal ideation
- B. Remove all opioid medications from the home immediately without replacement
- C. Dismiss the statement as a normal expression that requires no clinical attention
- D. Take the statement seriously — explore what is driving his thoughts (fear of suffering, loss of control, depression, existential distress), assess for major depression, optimize symptom management, secure the medications to prevent impulsive action, and involve the interdisciplinary team

234. A 72-year-old woman with end-stage heart failure on hospice is actively dying. Her family is at the bedside. Her breathing has become agonal — irregular, gasping breaths occurring every 30–40 seconds. Her daughter asks, "Is she trying to breathe? Is she in pain?" Which of the following is the most accurate and compassionate response?

- A. "She is actively struggling to breathe and we need to increase her medications immediately."
- B. "The gasping breaths you see are a brainstem reflex called agonal breathing — they are not a conscious effort to breathe and do not indicate pain or distress. Your mother is not aware of these movements. This is a normal and expected part of the final stage of dying."

- C. "These are seizures and require anticonvulsant medication."
- D. "We should intubate her to support her breathing."

235. A palliative care physician is reviewing the quality metrics for her hospital-based palliative care consultation service. She notes that the average time from palliative care consultation to hospice referral is 2 days, but the average time from hospital admission to palliative care consultation is 12 days. This data pattern most strongly suggests which of the following quality improvement opportunities?

- A. The palliative care team is making referrals too quickly after consultation
- B. The hospital should eliminate the palliative care consultation service because it delays hospice enrollment
- C. Hospice referral criteria should be loosened to allow admission without palliative care consultation
- D. The primary opportunity for improvement is earlier identification of patients who would benefit from palliative care consultation — the 12-day delay from admission to consultation suggests that triggers for palliative care referral need to be implemented earlier in the hospital course

236. A 66-year-old man with advanced pancreatic cancer on hospice has been on a stable opioid regimen. He develops acute-onset severe abdominal pain, rigidity, and hemodynamic instability. He is on comfort measures only with a DNR order. The hospice physician suspects a catastrophic intra-abdominal event (perforation, hemorrhage). The patient is alert and in severe distress. Which of the following represents the most appropriate immediate intervention?

- A. Transfer to the hospital for emergency surgical evaluation
- B. Administer IV fluids for hemodynamic resuscitation while awaiting surgical consultation
- C. Aggressive symptom management — opioid bolus for severe pain, midazolam for distress, and ongoing comfort care consistent with his goals
- D. Withhold all interventions and observe

237. A 70-year-old man with advanced COPD on hospice has been having increasing dyspnea despite optimization of morphine and a fan to the face. He is also on benzodiazepines for anxiety. The hospice team notes that his oxygen saturation has been running 82–85% on his baseline 2 L/min nasal cannula. He is clearly hypoxemic. Based on current evidence, which of the following is the most appropriate oxygen management strategy?

- A. Supplemental oxygen should be increased because he IS hypoxemic — unlike non-hypoxemic patients (where oxygen provides no benefit over room air), patients with documented hypoxemia (SpO₂ consistently below 90%) may benefit from supplemental oxygen for dyspnea relief
- B. Oxygen should be discontinued entirely because it provides no benefit for dyspnea under any circumstances
- C. Oxygen should be replaced with helium-oxygen mixture (heliox) for all dyspneic patients
- D. Oxygen should be titrated to achieve a saturation of 99% for maximum symptom benefit

238. A 65-year-old woman with metastatic breast cancer and leptomeningeal carcinomatosis develops persistent nausea and vomiting associated with severe headache and papilledema. Her nausea has not responded to ondansetron 8 mg IV or metoclopramide 10 mg IV. Based on the mechanism of her nausea, which of the following is the most appropriate targeted antiemetic?

- A. Higher-dose ondansetron (16 mg IV) for more potent 5-HT₃ blockade
- B. Dexamethasone 16 mg IV to reduce cerebral edema and intracranial pressure — the elevated ICP from leptomeningeal disease is directly stimulating the vomiting center, and corticosteroids address this mechanism
- C. Scopolamine transdermal patch for vestibular-mediated nausea
- D. Prochlorperazine 10 mg IV for additional D₂ blockade at the chemoreceptor trigger zone

239. A hospice program is being audited by Medicare. The auditors identify that the program has been billing for General Inpatient Care (GIP) for a patient who was admitted to an inpatient hospice unit for "caregiver exhaustion and need for respite." The audit finding identifies this as a billing error. Why is the GIP billing incorrect in this situation?

- A. GIP is only available in acute care hospitals, not in inpatient hospice units
- B. GIP is billed only when Medicare specifically pre-authorizes each individual admission
- C. GIP requires a minimum 14-day inpatient stay that this admission did not meet
- D. GIP is for acute symptom management requiring inpatient-level care — caregiver exhaustion/respite is the indication for Inpatient Respite Care (IRC), not GIP, and billing the higher-reimbursement GIP level for a respite need constitutes incorrect billing

240. A 73-year-old woman with advanced lung cancer has been on hospice for four months. She tells her hospice physician, "I'm at peace with dying. But I worry about my husband. He doesn't have anyone

else. Who will take care of him after I'm gone?" The physician's most appropriate response incorporates which of the following?

- A. "That's not something you should worry about right now. Focus on yourself."
- B. "Your husband will be fine. People are resilient."
- C. "I can hear how much you love your husband and how concerned you are about his future. Let's talk about what we can do to prepare — our social worker can help connect him with community resources, and our bereavement team will continue to support him after your death. Would it also help to talk with your husband about your concerns together?"
- D. "I'll refer your husband to a grief counselor after your death."

Practice Exam 2: Answer Key and Full Answer Explanations

1. B — Tachyphylaxis to calcitonin develops within approximately 48 hours, meaning its calcium-lowering effect diminishes rapidly despite continued dosing. Calcitonin provides a rapid onset of action (hours) that bridges the gap until bisphosphonates take effect (24–48 hours to onset, nadir at 4–7 days). This makes calcitonin a valuable short-term bridge agent but an ineffective long-term treatment for malignant hypercalcemia.

2. D — Portal hypertensive ascites responds to the combination of spironolactone (aldosterone antagonist addressing the sodium retention driven by RAAS activation) and furosemide (loop diuretic for additional natriuresis). This combination is first-line for cirrhotic ascites with portal hypertension. Non-portal-hypertensive malignant ascites from peritoneal carcinomatosis responds poorly to diuretics — but this patient's ascites is portal hypertension-mediated, making diuretics appropriate.

3. A — Asking about conditions worse than death identifies the patient's threshold — the point beyond which continued treatment is no longer consistent with his values. This question reveals what the patient considers an unacceptable quality of life (permanent ventilator dependence, loss of consciousness, complete dependence on others) and directly informs decisions about the limits of life-sustaining treatment. It is one of the most powerful questions in goals-of-care communication.

4. C — Oxycodone is partially metabolized by CYP2D6 to oxymorphone (an active, potent metabolite) and by CYP3A4 to noroxycodone (weakly active). In progressive renal failure, metabolite accumulation becomes a concern. While oxycodone is generally better tolerated in renal impairment than morphine, a

GFR of 15 warrants close monitoring and potential rotation to fentanyl, which has no active metabolites. Meperidine is never appropriate in palliative care.

5. B — Bladder distension is one of the most common and most easily reversible causes of agitation and discomfort in dying patients. A palpable, distended bladder in a moaning, uncomfortable patient should be catheterized before attributing the distress to pain or terminal agitation. This intervention frequently resolves the agitation completely, as illustrated by this scenario. Always check for bladder distension and fecal impaction before escalating analgesics or sedatives.

6. D — Duloxetine is an SNRI with demonstrated efficacy for both neuropathic pain and major depression, making it the ideal dual-purpose agent when both conditions coexist. It enhances descending inhibitory pain pathways through increased serotonin and norepinephrine in the spinal cord while simultaneously treating depression. This approach reduces polypharmacy by addressing two problems with one medication — a core prescribing principle in palliative care.

7. A — The physician's response combines two NURSE elements: Support ("We will be with you through this, and our goal is your comfort" — committing to ongoing presence and care) and Knowledge ("We have very effective medications to make sure you don't feel short of breath" — providing factual reassurance about symptom management capability). This combination addresses both the patient's fear of abandonment and his fear of uncontrolled symptoms.

8. C — This patient meets Medicare hospice eligibility criteria for dementia with FAST Stage 7D plus multiple qualifying comorbid conditions in the past 12 months: stage 3 pressure injury, aspiration pneumonia, significant weight loss (15%), and low serum albumin (2.3 g/dL). The six-month prognosis is an estimate, not a deadline — survival beyond six months does not disqualify a patient who continues to meet clinical criteria at recertification.

9. B — The POLST indicates comfort measures only and DNR status. These orders apply to the patient's overall care, including new clinical events. The hemorrhagic stroke in the setting of metastatic cancer with a pre-existing POLST should be managed with comfort-focused symptom management — pain control, seizure prevention with benzodiazepines, and emotional support for the family. The POLST does not need to be revoked because a new medical event occurs.

10. A — Abruptly discontinuing a chronic transdermal fentanyl patch (100 mcg/hour — a high dose indicating significant opioid tolerance) without providing equivalent opioid coverage causes two simultaneous problems: recurrence of the original cancer pain that the fentanyl was controlling, and opioid withdrawal syndrome from sudden cessation of chronic opioid therapy. The correct approach is

to continue equivalent opioid coverage through an alternative route and add additional analgesia for new surgical pain.

11. D — A strong magnet placed over the ICD generator suspends shock delivery for as long as the magnet remains in position. Taping it in place provides continuous suspension until the device representative arrives for permanent reprogramming. The magnet does not affect the LVAD (a separate device with a separate power source). Turning off the LVAD would cause immediate death from loss of cardiac output and is not indicated to manage the ICD. This is the correct emergency intervention when the device representative is unavailable.

12. C — Projectile vomiting with headache and papilledema indicates increased intracranial pressure as the mechanism driving the emesis. ICP-related vomiting occurs through direct stimulation of the vomiting center, not through the CTZ or GI tract pathways. Dexamethasone 16 mg IV reduces vasogenic edema surrounding the brain metastases, directly addressing the ICP elevation that is causing the symptoms. This is the most targeted treatment for ICP-mediated nausea and vomiting.

13. B — The oral-to-parenteral conversion ratio for hydromorphone is 5:1 (7.5 mg oral = 1.5 mg parenteral). Therefore: $48 \text{ mg oral} \div 5 = 9.6 \text{ mg parenteral hydromorphone per 24 hours}$. No cross-tolerance reduction is needed because the patient is being converted to the same drug by a different route, not switching to a different opioid. The 5:1 ratio for hydromorphone is a high-yield exam calculation.

14. A — Autonomy is the ethical principle that most directly supports honoring a competent patient's refusal of nutrition and hydration. A patient with decision-making capacity has the constitutionally protected right to refuse any medical treatment, including artificial nutrition and hydration. This right was affirmed by the Supreme Court in Cruzan and is supported by virtually all major medical ethics organizations. The wife's distress is understandable and deserves compassionate support, but it does not override the patient's autonomous decision.

15. D — This patient has failed maximal medical management of malignant bowel obstruction (octreotide, anticholinergics, dexamethasone) and continues to vomit 400 mL daily. A venting gastrostomy tube provides intermittent decompression of the stomach, reducing vomiting and potentially allowing the patient to eat and drink small amounts for pleasure. Metoclopramide is absolutely contraindicated in complete bowel obstruction. A venting G-tube is far more comfortable than chronic NG tube drainage.

16. C — This certification narrative is adequate because it includes specific clinical findings (FEV1 28%, oxygen-dependent, cor pulmonale, BMI 18.5), functional trajectory (wheelchair-dependent, declining from independent ambulation over 6 months), disease-specific prognostic markers (hospitalizations with ICU admissions, weight loss), and a clinical rationale connecting these findings to the six-month prognosis estimate. This is the standard of documentation Medicare requires.

17. B — This situation requires a comprehensive, non-punitive response that addresses the underlying drivers of the behavior. The patient's stockpiling may reflect fear of uncontrolled suffering, a desire for control over his dying process, unrecognized depression, or undertreated pain. The appropriate response explores these drivers, optimizes pain management (his pain is 5/10, suggesting undertreated pain), secures the medications to prevent a potential overdose, and involves the interdisciplinary team in a holistic plan.

18. A — This presentation — bilateral, symmetric, length-dependent numbness and tingling in a stocking distribution with progressive worsening during chemotherapy — is classic for chemotherapy-induced peripheral neuropathy (CIPN). Oxaliplatin is one of the most neurotoxic chemotherapy agents, causing a cumulative, dose-dependent, primarily sensory axonal neuropathy. CIPN may persist for months to years after chemotherapy is completed and often requires ongoing management with gabapentinoids or duloxetine.

19. D — After dialysis discontinuation, the typical course is gradual — fatigue, decreased appetite, progressive drowsiness, and somnolence developing over 7–14 days as uremic toxins accumulate. Death usually results from hyperkalemia (cardiac arrest) or uremic encephalopathy (progressive coma). The process is generally manageable with palliative care and is often described as relatively peaceful. Seizures and massive fluid overload are not the typical presenting features in most patients.

20. C — Lymphedema results from lymphatic obstruction (by tumor or surgical disruption of lymph nodes) and the subsequent accumulation of protein-rich interstitial fluid that the lymphatic system can no longer drain. Furosemide removes intravascular fluid through renal excretion but cannot address interstitial fluid trapped by lymphatic insufficiency. The non-pitting edema, thickened skin, and positive Stemmer's sign are pathognomonic for lymphedema. Treatment requires compression therapy and manual lymphatic drainage, not diuretics.

21. B — The parenteral-to-oral conversion ratio for hydromorphone is 1:5 (1.5 mg parenteral = 7.5 mg oral). To convert from IV to oral, multiply by 5: $12 \text{ mg IV} \times 5 = 60 \text{ mg oral hydromorphone per 24 hours}$. This can be prescribed as hydromorphone immediate-release 10 mg every 4 hours (60 mg/day) or converted to an equivalent sustained-release formulation with breakthrough dosing.

22. D — This patient has a multi-month prognosis, is enjoying quality of life, and has developed a symptomatic infection causing distress (fever, cough, pleuritic pain). Oral antibiotics will relieve these distressing symptoms and are consistent with comfort-focused hospice care. The decision to treat is based on whether the antibiotic will relieve suffering — not on a blanket policy of treating or not treating infections in hospice. This patient clearly benefits from treatment.

23. A — Burning, electric-shock-like pain at a surgical site with allodynia (pain from light touch) and lancinating exacerbations two years after thoracotomy is classic chronic post-surgical neuropathic pain. Post-thoracotomy pain syndrome results from intercostal nerve damage during surgery and may involve central sensitization. It requires adjuvant analgesics (gabapentinoids, SNRIs, or topical lidocaine) rather than simple analgesics alone.

24. C — The ambivalent, conflicted nature of the father-son relationship is the strongest risk factor for complicated bereavement in this scenario. An estrangement of 15 years followed by a deathbed reconciliation creates a complex emotional landscape of unresolved guilt, missed opportunities, and grief for the relationship that might have been — all compounded by the reality that the reconciliation came too late for meaningful repair. Ambivalent relationships are consistently identified as one of the strongest predictors of complicated grief.

25. A — This patient's nine-day constipation despite senna monotherapy demonstrates that his laxative regimen is inadequate for his opioid dose. The critical teaching point is that tolerance to opioid-induced constipation does not develop — prophylactic laxatives must be continued and escalated proportionally with opioid doses for the entire duration of therapy. The regimen should be significantly escalated (increased stimulant + osmotic agent) and the patient counseled about consistent adherence.

26. B — A positional headache (worse upright, better supine) developing shortly after an intrathecal pump refill is classic for a CSF leak — either from the catheter insertion site or from a loosened catheter connection. CSF leaks cause low intracranial pressure headaches through traction on pain-sensitive meningeal structures when the patient is upright. Treatment includes bed rest, hydration, caffeine, and in refractory cases, an epidural blood patch. Granuloma and overdose would present differently.

27. D — The combination of Cheyne-Stokes respirations, mottling extending above the knees, mandibular breathing, decreased urine output, and loss of radial pulse represents a cluster of physiologic signs strongly associated with death within 72 hours. No single sign is reliably predictive alone, but when three or more cluster together, the probability of imminent death is high. This information should be communicated to the family with compassion and anticipatory guidance.

28. C — Morphine and hydromorphone are metabolized primarily by glucuronidation (UGT enzymes), a pathway that is relatively preserved until late-stage hepatic failure. This makes them generally preferred opioids in liver disease. However, reduced first-pass hepatic metabolism in cirrhosis increases the oral bioavailability of these drugs — a greater proportion of the oral dose reaches systemic circulation — so oral doses should be reduced. Codeine requires CYP2D6 activation and is unpredictable in liver disease.

29. A — The communication priority is to respond to the patient's emotion before providing clinical information. She is experiencing acute grief, fear, and the overwhelming realization that she may not see her children grow up. In this moment, medical information cannot be heard or processed. The physician should acknowledge her pain ("I can see how devastating this is"), validate her feelings ("Of course you're thinking about your kids — that's what any loving mother would feel"), and allow silence before any discussion of next steps.

30. B — The Temel trial (2010, NEJM) randomized patients with newly diagnosed metastatic non-small cell lung cancer to early palliative care concurrent with standard oncologic treatment versus standard treatment alone. The early palliative care group had better quality of life, lower rates of depression, received less aggressive end-of-life care, and — unexpectedly — had significantly longer median survival (11.6 vs. 8.9 months). This landmark trial transformed the understanding of palliative care's role in oncology.

31. D — This patient's rising creatinine (1.0 to 2.8 mg/dL) indicates declining renal function, which reduces clearance of morphine's active metabolite M6G. M6G is a potent mu agonist that accumulates in renal impairment, producing progressive sedation, respiratory depression, and potentially neurotoxicity. The patient's pain is well-controlled (suggesting adequate analgesic effect), but the increasing drowsiness reflects accumulating M6G. Management involves opioid rotation to fentanyl (no active metabolites) or dose reduction with close monitoring.

32. C — Morphine sustained-release poses the greatest safety risk during route conversion because (1) abrupt cessation will produce both uncontrolled pain recurrence and opioid withdrawal syndrome (the patient is opioid-tolerant on 60 mg/day), and (2) the equianalgesic conversion from oral to an alternative route (SC, SL, rectal) requires accurate calculation to avoid either underdosing (pain crisis) or overdosing (toxicity). Crushing SR tablets is dangerous, and the conversion must be calculated using the appropriate ratio.

33. A — This scenario involves a cognitively mature 14-year-old with extensive medical experience who disagrees with her parents about continuing chemotherapy. The appropriate response is a facilitated family meeting that includes the adolescent as a primary participant, explores her wishes and the parents' concerns, and works toward alignment. Neither overriding the adolescent's preferences entirely

(disrespecting her developing autonomy) nor complying without parental involvement (undermining parental authority) is appropriate.

34. B — The appropriate response acknowledges the insomnia as a legitimate clinical concern, provides education about the specific risks of combining unprescribed benzodiazepines with opioids (respiratory depression is the primary concern), addresses the insomnia with appropriate treatment (trazodone, mirtazapine, sleep hygiene), and documents the conversation. Immediate discharge from care punishes the patient for a behavior driven by an unmet symptom need. The therapeutic relationship should be maintained while safety boundaries are reinforced.

35. D — A cognitively intact patient who understands the aspiration risks and makes an informed decision to prioritize eating pleasure over aspiration prevention is exercising autonomy. The physician's obligation is to ensure the patient is truly informed (understands the risks), document the discussion, respect the decision, and support the wife's understanding that this is a valid choice. Many patients with progressive neurologic disease prefer the risk of aspiration to the loss of the normalcy and pleasure of eating.

36. A — The fluctuating pattern — good days alternating with bad days within an overall declining trajectory — is characteristic of the organ failure (Trajectory 2) disease trajectory. Heart failure and COPD follow this sawtooth pattern, where patients oscillate between better and worse function while the overall trend is downward. Good days do not indicate recovery; they reflect the inherent variability within a declining trajectory. This concept is important for family education and realistic expectation-setting.

37. C — Severe diarrhea in a patient on checkpoint inhibitor immunotherapy (ipilimumab is particularly associated with GI toxicity) with negative stool studies for infection is classic immune-related colitis. This is an immune-related adverse event (irAE) requiring systemic corticosteroids (prednisone 1 mg/kg/day or equivalent) and consideration of immunotherapy hold or discontinuation depending on severity. Loperamide alone is insufficient for moderate-to-severe immune-related colitis.

38. B — A PAINAD score of 7/10 in a patient with no current analgesic therapy warrants a structured analgesic trial. The evidence-based approach for pain management in advanced dementia begins with scheduled acetaminophen (the safest first-line agent) and reassesses behavioral pain scores after 48–72 hours. If PAINAD scores improve, pain was the likely cause of the behavioral distress. If scores do not improve, the differential broadens to non-pain causes. Invasive diagnostic workup is not consistent with the patient's overall goals.

39. D — Albumin replacement is standard practice after large-volume paracentesis (more than 5 liters) in cirrhotic ascites to prevent post-paracentesis circulatory dysfunction — a complication specific to portal hypertensive ascites where rapid fluid removal causes intravascular volume depletion and RAAS activation. Malignant ascites from peritoneal carcinomatosis does not carry the same risk, and routine albumin replacement is not required. This distinction is clinically important and frequently tested.

40. A — Methadone uniquely prolongs the QTc interval among opioids, creating a risk of torsades de pointes — a potentially fatal ventricular arrhythmia. This risk necessitates ECG monitoring at baseline, after dose stabilization, and periodically during therapy. The risk is dose-dependent and is amplified by concomitant use of other QTc-prolonging medications, electrolyte disturbances (hypokalemia, hypomagnesemia), and hepatic impairment. No other commonly used opioid carries this specific cardiac risk.

41. C — A terminal rally (also called terminal lucidity) is a period of unexpected, often dramatic improvement in alertness, appetite, and engagement that may occur hours to days before death. It is poorly understood but well-recognized. Families should be gently informed that this rally does not indicate recovery — it is a transient phenomenon, and the patient's overall trajectory remains unchanged. Misinterpreting a terminal rally as improvement can lead to shock and feelings of betrayal when death follows shortly after.

42. B — School-age children (ages 6–12) understand the permanence and universality of death but lack the emotional coping skills of adults. Their grief commonly manifests through behavioral changes — aggression, academic decline, acting out, and denial ("My dad is fine"). These behaviors represent the child's attempt to manage overwhelming emotions with limited developmental resources. The denial is self-protective, not pathologic, and requires supportive intervention rather than disciplinary action.

43. D — Under the Medicare hospice benefit, a patient may revoke hospice at any time to pursue disease-directed therapy. Revocation is the patient's right and does not require justification. After receiving the targeted therapy, the patient may re-elect hospice if she chooses. This preserves patient autonomy and ensures that hospice enrollment does not become a barrier to accessing potentially beneficial treatments that the patient values.

44. A — This patient is in acute respiratory distress with comfort measures only. The appropriate response is aggressive symptom management: a morphine bolus (50% increase over current dose) addresses the sensation of air hunger, midazolam addresses the anxiety component, upright positioning improves diaphragm mechanics, a fan to the face stimulates trigeminal afferents, and supplemental oxygen may help given her significant hypoxemia (75%). Intubation violates her POLST. Withholding

morphine out of fear of respiratory depression is a clinical error — untreated dyspnea is the greater harm.

45. C — Mixed somatic-neuropathic pain requires a multimodal approach that targets both mechanisms. The opioid addresses the somatic nociceptive component (deep, aching tumor pain), while an adjuvant analgesic (gabapentin or duloxetine) targets the neuropathic component (burning, shooting pain from femoral nerve compression). Palliative radiation to the tumor mass may reduce both components, and a femoral nerve block provides targeted regional analgesia. No single agent optimally addresses both mechanisms.

46. B — Under the Medicare hospice benefit, the patient retains Medicare coverage for conditions unrelated to the terminal diagnosis. Her diabetes is unrelated to her pancreatic cancer, and she may continue seeing any physician (including her gastroenterologist/endocrinologist) for diabetes management. These visits are covered by Medicare Part B, not by the hospice per diem. Hospice enrollment does not restrict access to care for non-terminal conditions.

47. D — This case perfectly illustrates the principle that agitation in patients with advanced dementia should trigger evaluation for reversible medical causes before attributing the behavior to disease progression. Urinary retention is a common, easily reversible cause of distress in patients who cannot verbally report their symptoms. Bladder distension, fecal impaction, pain, and infection should always be assessed before initiating antipsychotic therapy for agitation in dementia patients.

48. A — The most appropriate response acknowledges the patient's concern, provides an honest clinical assessment (the lump is likely a metastatic lymph node given her known cancer), and then explores whether further evaluation would change management or align with her current comfort-focused goals. For most hospice patients, a new metastatic lesion does not change the treatment plan, and invasive diagnostic procedures may not serve the patient's comfort goals. The decision should be guided by the patient's values.

49. C — This patient has been stable on opioids for months but now develops neurotoxicity (confusion, hallucinations, myoclonus) in the context of poor oral intake and dehydration. Dehydration reduces renal perfusion and GFR, causing accumulation of renally excreted opioid metabolites (M6G from morphine, H3G from hydromorphone, or metabolites of whichever opioid he is taking). The hypotension (90/60) supports dehydration. Management includes hydration (if consistent with goals) and consideration of opioid rotation to fentanyl.

50. B — The distinction between physical dependence and addiction is one of the most important concepts in palliative care opioid management. Physical dependence (the body's adaptation to chronic opioid exposure, manifesting as withdrawal if the drug is stopped abruptly) is expected and universal with chronic opioid use. Addiction (compulsive drug-seeking behavior despite harm) is rare in patients taking opioids as prescribed for legitimate pain in the setting of serious illness. Confusing the two leads to inappropriate undertreating of pain.

51. D — This patient's dyspnea has not responded adequately to opioid alone, suggesting a significant anxiety component. Midazolam 1–2 mg SC or SL provides rapid anxiolysis and complements the opioid's effect on the dyspnea sensation. The combination of low-dose opioid plus low-dose benzodiazepine is often more effective for dyspnea with anxiety than either agent alone. Increasing oxygen may help given the hypoxemia, but addressing the anxiety component is the most important pharmacologic next step.

52. A — The clinical features — poorly localized, deep, cramping/squeezing quality, described with a flat hand over a broad area, accompanied by autonomic features (nausea, diaphoresis) — are classic for visceral nociceptive pain arising from intra-abdominal organs. Visceral pain is transmitted by C fibers through the autonomic nervous system, explaining the poor localization and the autonomic accompaniments. This classification guides treatment — visceral pain responds to opioids and may benefit from anticholinergics, corticosteroids, or celiac/hypogastric plexus blocks.

53. C — The key consideration is whether the antibiotic will relieve distressing symptoms. This patient has a UTI causing fever, dysuria (crying during urination indicates pain), and new delirium — all distressing symptoms that antibiotics can effectively treat. Treating the UTI is consistent with "comfort measures only" because it directly addresses suffering. The advance directive does not prohibit all medications — it directs that the goal of treatment should be comfort, and antibiotics for symptom relief serve that goal.

54. D — Withdrawal of BiPAP, like withdrawal of any form of life-sustaining therapy, is the patient's right when he has decision-making capacity and has made an informed decision. There is no ethical or legal distinction between withdrawing BiPAP, withdrawing invasive mechanical ventilation, stopping dialysis, or deactivating an LVAD — all are forms of treatment refusal protected by the principle of autonomy. The withdrawal should be preceded by pre-medication for comfort (opioids, benzodiazepines) and supported by the presence of the clinical team.

55. D — Left shoulder pain without shoulder pathology in a patient with progressive hepatomegaly is classic referred visceral pain from diaphragmatic irritation. The enlarged liver pushes against the diaphragm, and the phrenic nerve (C3-C5) shares spinal cord segments with the somatic sensory

innervation of the shoulder. This convergence of visceral and somatic afferents in the dorsal horn produces referred pain perceived at the shoulder. This is one of the most frequently tested examples of referred visceral pain on the HPM exam.

56. A — The hospice nurse should gently express concern about the wife's observable decline (weight loss, fatigue, tearfulness), normalize the difficulty of caregiving ("What you're doing is incredibly demanding, and it's natural for it to take a toll"), ask open-ended questions about her own health and coping, and explore whether additional support (respite care, increased aide visits, counseling, support groups) would be helpful. Caregiver burnout is a clinical emergency in home-based hospice because caregiver collapse threatens the entire care plan.

57. C — Furosemide provides direct symptom relief by reducing the volume overload that is causing dyspnea. The clinical findings (crackles, S3, JVD, weight gain, edema) clearly indicate fluid overload as the cause of her worsening dyspnea. Increasing the furosemide dose is a comfort-directed intervention — it treats the symptom (dyspnea) by addressing its cause (congestion). Discontinuing the diuretic because it is "disease-directed" would allow dyspnea to worsen, violating the principle of symptom management.

58. D — Albumin replacement after large-volume paracentesis is standard practice in cirrhotic ascites to prevent post-paracentesis circulatory dysfunction (PPCD) — a hemodynamic complication caused by rapid fluid shifts that activate the RAAS and can lead to renal impairment and hepatorenal syndrome. The standard dose is 6–8 g of albumin per liter removed. This practice is specific to portal hypertensive (cirrhotic) ascites and is not routinely required for malignant ascites from peritoneal carcinomatosis.

59. B — The durable power of attorney for health care (DPAHC) is the single most important advance care planning document because it names a surrogate who can respond to any clinical scenario — including situations the patient never specifically anticipated. A living will addresses only pre-specified scenarios and may not cover the actual clinical situation that arises. A well-informed surrogate who understands the patient's values provides the most flexible and responsive decision-making authority.

60. A — Patients with Lewy body dementia are exquisitely sensitive to dopamine-blocking antipsychotics. Haloperidol blocks D2 receptors, causing severe parkinsonism, rigidity, dysphagia, and potentially neuroleptic malignant syndrome (NMS) — the triad of rigidity, fever, and autonomic instability seen in this patient. This is one of the most dangerous drug-disease interactions in palliative care. Quetiapine (lowest D2 blockade) is the preferred antipsychotic for psychosis in Lewy body dementia.

61. C — NSAIDs are specifically effective for bone pain because they inhibit prostaglandin synthesis at the site of bony metastatic involvement. Prostaglandins produced by bone metastases sensitize peripheral nociceptors and contribute to inflammation, making NSAIDs uniquely targeted for this pain mechanism. The addition of an NSAID to opioid therapy for bone pain provides a meaningful opioid-sparing effect that is not achieved by gabapentinoids or SNRIs, which target neuropathic mechanisms.

62. D — Cholestatic pruritus is mediated in part by elevated endogenous opioid tone — cholestasis increases circulating endogenous opioids (endorphins, enkephalins) that activate central mu-opioid receptors, producing pruritus through a central rather than peripheral mechanism. Naltrexone, as an opioid antagonist, blocks these central mu receptors and reduces the opioid-mediated component of cholestatic itch. This is the pharmacologic rationale for using opioid antagonists in cholestatic pruritus.

63. B — This presentation — intrusive memories of the death event, avoidance of reminders (the hospice facility), nightmares about the death, and inability to function — in the context of witnessing a traumatic dying process (prolonged terminal agitation) is most consistent with PTSD or acute stress response. The traumatic nature of the witnessed death, rather than the loss itself, is the primary driver of her symptoms. Treatment involves trauma-focused therapy (EMDR, CPT) rather than standard grief counseling alone.

64. A — When equally ranked surrogates (two adult children without designated proxy status) disagree, there is no automatic tiebreaker in the legal hierarchy. The clinical team should facilitate communication between the family members, seek consensus through family meetings with clear, consistent medical information, and consider ethics committee consultation if agreement cannot be reached. The court should be involved only as a last resort when all other avenues of resolution have been exhausted.

65. C — This response balances respect for the patient's autonomy and interest in cannabis with clinical responsibility. It acknowledges her question without dismissal, provides honest information about what cannabis can and cannot do (symptom management yes, cancer cure no), recommends continuing evidence-based treatment, and offers to incorporate cannabis for symptom management alongside standard therapy. Neither dismissing nor endorsing the cure claim is appropriate.

66. D — This response accurately identifies the breathing pattern (Cheyne-Stokes), normalizes it as a part of the dying process, addresses the family's primary fear (suffocation), and provides reassurance that the patient is not in distress. Anticipatory guidance about breathing pattern changes should ideally be provided before they occur, but when the family encounters them unexpectedly, this type of clear, compassionate explanation reduces panic and supports the family's ability to remain at the bedside.

67. B — This calculation requires three steps: (1) The morphine is already parenteral (SC), so no oral-to-parenteral conversion is needed. (2) Convert parenteral morphine to parenteral hydromorphone using the equianalgesic ratio: morphine 10 mg parenteral = hydromorphone 1.5 mg parenteral, so $96/10 \times 1.5 = 14.4$ mg parenteral hydromorphone. (3) Apply 25% cross-tolerance reduction because this is a rotation between different opioids: $14.4 \times 0.75 = 10.8$ mg SC hydromorphone per 24 hours.

68. A — The antibiotic decision in hospice pneumonia should be guided by a clinical assessment of whether the infection is causing symptoms that antibiotics could relieve, weighed against the patient's prognosis, goals, and the burden of treatment. This is a values-based clinical decision, not a protocol-driven one. Some hospice patients benefit from antibiotics for symptomatic infections; others are better served by comfort measures alone. The decision should be individualized for each patient and each episode.

69. C — Substituted judgment should be used, giving priority to the most recent expression of the patient's values. People's values evolve as their illness progresses — preferences expressed years ago when healthy may not reflect current values shaped by the experience of serious illness. The daughter's account of a more recent conversation ("after the last hospitalization") is more likely to reflect the patient's evolved perspective. This is why ongoing goals-of-care conversations throughout the illness trajectory are essential.

70. A — Some hospice programs may negotiate to provide certain disease-directed therapies — including targeted cancer agents — under the hospice per diem if they determine the therapy is primarily for symptom management or palliation. This varies by hospice program and situation. The standard pathway is revocation, treatment, and re-enrollment, but creative arrangements are possible. The patient cannot simply receive both without any modification to the hospice arrangement.

71. B — Naming a surrogate is necessary but insufficient. The DPAHC is only as good as the surrogate's understanding of the patient's values. A surrogate who does not know what the patient would want in specific clinical scenarios is making decisions based on their own values rather than the patient's — substituting their own judgment for the patient's rather than exercising substituted judgment. The patient-surrogate conversation about values, goals, fears, and specific treatment preferences is what makes the DPAHC effective.

72. A — Prophylactic fixation prevents a pathologic fracture in a weight-bearing bone with significant cortical destruction (60% — well above the 50% threshold that indicates high fracture risk). A pathologic fracture of the proximal femur would cause severe pain, loss of ambulatory ability, and potentially fatal complications (fat embolism, pneumonia from immobility). In a patient with ECOG 2

and 4–6 months expected survival, preserving ambulation through prophylactic fixation is a meaningful quality-of-life intervention.

73. C — Medicare requires hospice programs to use volunteers to provide a minimum of 5% of total patient care hours. This is a regulatory requirement, not optional. Volunteer services include companionship, respite for caregivers, transportation, vigil sitting, and legacy projects. The husband's request for a few hours of companionship while he attends his own medical appointments is exactly the type of service hospice volunteers are designed to provide.

74. D — Unlike catastrophic hemorrhage (which requires immediate sedation), this moderate, slowing GI bleed can be managed with a measured approach: anxiolysis (low-dose lorazepam) for the patient's fear, opioids for any associated discomfort, a proton pump inhibitor or sucralfate for mucosal protection, monitoring of the bleeding, and ongoing communication with the patient and family. The bleeding is not immediately life-threatening, and the patient is alert — a graduated response is appropriate.

75. B — Myoclonus (involuntary jerking movements) is a common neurologic manifestation of uremia, distinct from seizures. Uremic myoclonus results from metabolic encephalopathy and is managed with benzodiazepines (clonazepam, lorazepam) rather than anticonvulsant loading. Seizures in uremia would involve more sustained, rhythmic activity with altered consciousness, though the distinction can be clinically challenging. The wife should be reassured that these movements are expected and treatable.

76. A — Mottling extending above the knees with loss of peripheral pulses (radial pulse no longer palpable) in an unresponsive patient represents advanced cardiovascular failure with progressive centralization of blood flow. When mottling extends to the thighs and radial pulses are lost, death is typically imminent — within hours. This is one of the most reliable clinical signs for predicting death within a very short timeframe and should prompt the family to be informed that death is approaching.

77. C — An indwelling pleural catheter (IPC) is the most appropriate long-term management for recurrent malignant pleural effusion in a patient with adequate performance status and months of expected survival. IPCs allow intermittent home drainage without repeated clinic visits or procedure room thoracenteses, significantly reducing treatment burden. Pleurodesis may fail in malignant effusions with trapped lung. Serial thoracenteses every 7–10 days are burdensome. Diuretics are ineffective for malignant pleural effusions.

78. D — Ipilimumab (an anti-CTLA-4 checkpoint inhibitor) is particularly associated with immune-related hypophysitis — inflammation of the pituitary gland that can cause secondary adrenal insufficiency, hypothyroidism, and hypogonadism. The combination of fatigue, hypotension, nausea,

and hypoglycemia with an undetectable cortisol is classic for adrenal insufficiency from pituitary inflammation. Treatment requires urgent corticosteroid replacement (hydrocortisone) and endocrine evaluation.

79. B — If rifaximin would reduce the patient's confusion and agitation from hepatic encephalopathy — thereby directly relieving a distressing symptom of his terminal liver disease — its use is consistent with comfort-focused goals. Medications that provide symptom relief related to the terminal diagnosis are covered under the hospice per diem. The distinction between "disease-directed" and "symptom management" is based on clinical purpose, not drug category. Rifaximin used for comfort is a comfort medication.

80. A — Rapid large-volume drainage of ascites can cause hemodynamic instability through vasovagal response and intravascular volume redistribution. The correction is to drain more slowly — over 60–90 minutes rather than 30 minutes — with the patient in a reclined position and with monitoring for symptoms of hypotension. Smaller, more frequent drainages (1–2 liters daily rather than 3 liters every other day) may also reduce hemodynamic complications. This is an important practical counseling point for patients managing indwelling catheters at home.

81. C — Ketamine is an NMDA receptor antagonist that modulates central sensitization — the spinal cord and brain changes that amplify pain signaling in chronic pain states and opioid-refractory conditions. NMDA receptor activation contributes to wind-up, central sensitization, and opioid tolerance. By blocking NMDA receptors, ketamine can reverse these processes, restore opioid sensitivity, and provide analgesia through a mechanism entirely independent of opioid receptors. It is particularly useful in opioid-induced hyperalgesia.

82. D — This response provides honest reassurance ("many patients have less discomfort than they expect"), describes the available tools ("effective medications to manage pain, breathlessness, and anxiety"), makes a commitment ("our promise is that we will keep you comfortable"), and explores further ("what worries you most?"). It avoids both false certainty ("you'll feel nothing") and dismissal ("don't worry about it"), striking the balance between honest acknowledgment of uncertainty and genuine reassurance about comfort management.

83. B — Continuous home care (CHC) requires a minimum of 8 hours of predominantly nursing care (RN or LPN) within a 24-hour period. CNA hours, while valuable, do not constitute "nursing care" for CHC billing purposes. A day in which only CNA services were provided — without any RN or LPN presence — does not meet the criteria for CHC and should be billed as routine home care, not continuous care. This is a common compliance error that can trigger audit findings and claim denials.

84. A — The decision to treat a UTI in a patient with advanced dementia on comfort measures should weigh whether the infection is causing symptoms that produce distress (fever causing discomfort, dysuria causing pain, delirium causing agitation) against the patient's overall trajectory and goals. If treating the UTI would relieve distressing symptoms, it is consistent with comfort goals. If the patient is in the very final stages and treating would merely prolong dying, comfort measures alone may be more appropriate.

85. C — Denosumab is a monoclonal antibody that inhibits RANKL (receptor activator of nuclear factor kappa-B ligand), thereby blocking osteoclast differentiation and function. By reducing osteoclast-mediated bone resorption, denosumab decreases skeletal-related events (fractures, need for radiation or surgery) and may reduce bone pain over weeks. It does not provide immediate analgesia and is used as an adjunct to direct analgesic therapy, not as a replacement.

86. D — Medicare requires hospice programs to provide bereavement support for at least 13 months after the patient's death. This support typically includes an initial bereavement risk assessment, periodic contacts (phone calls, cards, home visits), memorial events, support groups, and referrals for individual grief counseling when indicated. The bereavement program reflects the recognition that the death of the patient is not the end of the hospice's clinical responsibility.

87. A — The most appropriate initial response is to ask the patient directly — in a separate conversation from the wife — how much information he wants about his illness. This respects both the patient's autonomy (he may want full disclosure) and the wife's cultural perspective (he may prefer to delegate information management to his family). The key question is: "Some people want to know all the details about their illness. Others prefer that their family handle the medical information. What would be most helpful for you?"

88. C — The most important factor in the nephrostomy decision is the patient's values, goals, and understanding of what the procedure would accomplish. Nephrostomy tubes will relieve the obstruction and reverse uremia, extending life — but they will not treat the cancer. The patient must understand that she would live longer but with nephrostomy tubes and progressive cancer. This decision requires informed consent that integrates medical facts with the patient's personal values about quality versus quantity of life.

89. C — The decision to treat hypercalcemia in a hospice patient is individualized based on goals. If the patient wants symptom relief, treating the hypercalcemia (which is causing confusion, constipation, and polyuria) may significantly improve comfort and function. If the patient's goals are comfort-only and treatment would merely prolong dying, supportive measures alone may be appropriate. Hypercalcemia

in advanced cancer carries a median survival of approximately 30 days, making the goal-alignment conversation essential.

90. D — The most important counseling point is that the death rattle is typically more distressing to the family than to the patient. Anticholinergics (glycopyrrolate, atropine) reduce NEW secretion production but do not dry EXISTING accumulated secretions — this explains why the noise may persist despite treatment. Deep suctioning is generally avoided because it is uncomfortable, stimulates more secretion production, and provides only temporary relief. Repositioning the patient on their side may allow gravity drainage and reduce noise.

91. A — A POLST indicating "comfort measures only" addresses resuscitation and life-sustaining treatment preferences — it does not categorically prohibit all surgical procedures. Hip repair in this context serves a comfort-focused goal: relieving severe pain and potentially restoring mobility. A fracture left untreated would cause ongoing suffering, immobility, and complications (pneumonia, DVT). The surgery is consistent with the patient's overall comfort goals and should be offered.

92. B — Naltrexone is an opioid antagonist that will block mu-opioid receptors throughout the body. In a patient taking morphine for pain, naltrexone will precipitate acute opioid withdrawal — severe pain, agitation, diaphoresis, nausea, vomiting, diarrhea — and will reverse analgesia. If naltrexone is to be used for cholestatic pruritus in an opioid-treated patient, either the opioid must be discontinued (with alternative pain management) or naltrexone must be started at an extremely low dose (1–2 mg) with very gradual titration.

93. D — Modern ICDs combine defibrillator (shock) and pacemaker (pacing) functions in a single device, but these functions can be independently programmed. Deactivating the shock function while maintaining pacing is a standard and commonly performed approach. This allows the patient to avoid painful shocks during the dying process while retaining the pacing support that prevents symptomatic bradycardia. This selective deactivation respects the patient's specific wishes.

94. C — A blood transfusion may provide temporary symptomatic relief of dyspnea and fatigue from severe anemia (hemoglobin 7.2 g/dL causing significant symptoms). The decision should weigh the expected symptom benefit against the burden of the transfusion procedure (time, facility visit, potential reactions) and its temporary nature (benefit typically lasts days to weeks in the setting of ongoing blood loss or marrow failure). Transfusions are not categorically excluded from hospice — they can be consistent with comfort-focused goals when used for symptom relief.

95. A — This situation involves potential medication diversion by the wife, but the underlying driver may be undertreated pain. The appropriate response addresses both the safety concern (reporting to the physician, securing the non-prescribed opioid) and the potential clinical need (assessing whether the patient's pain management is adequate). If the wife is obtaining additional opioids because the patient is undertreated, the solution is better pain management, not punishment. A comprehensive, non-punitive approach protects the patient while addressing the root cause.

96. B — A physician who is personally uncomfortable with ventilator withdrawal retains the right to conscientious objection — but this right is limited. The physician may decline to personally perform the withdrawal and may transfer the patient's care to a willing colleague, but may not abandon the patient, obstruct the patient's access to a willing provider, or delay the process in a way that causes suffering. The patient's right to refuse treatment is constitutionally protected and must be honored, even if the specific physician involved steps aside.

97. D — A PPS score of 20% indicates a patient who is bedbound, unable to do any activity, requires total care, has severely reduced intake (sips only), and is drowsy or comatose. PPS scores of 10–30% are associated with a prognosis of days to weeks. This information should guide communication with the family (anticipatory guidance about approaching death), ensure symptom management is optimized, and prompt review of the patient's advance care plan.

98. C — Evidence from multiple studies, including the landmark trial by Abernethy et al., demonstrates that supplemental oxygen does not provide additional dyspnea relief over room air in non-hypoxemic patients (SpO₂ above 90%). This patient's saturation of 91% is above the hypoxemia threshold. A fan directed at the face — stimulating trigeminal nerve afferents — has shown equivalent benefit to supplemental oxygen in non-hypoxemic dyspnea and should be the recommended initial non-pharmacologic intervention.

99. A — Multi-level epidural disease generally favors radiation therapy over surgery because surgical decompression addresses only a single level, while radiation can treat the entire involved spinal segment. The Patchell trial demonstrated superiority of surgery plus radiation over radiation alone for single-level compression, but patients with multi-level disease were excluded from that trial. Radiation therapy can address all four involved levels in this patient, while surgery at one level would leave three others untreated.

100. B — Mucositis management requires a comprehensive approach addressing multiple dimensions: oral hygiene (gentle brushing, bland rinses), pain management (topical analgesics like viscous lidocaine plus systemic analgesics for severe cases), infection prevention and treatment (antifungals if candidiasis develops), and nutritional support (dietary modification, supplementation). Hydrogen peroxide rinses are

irritating and can worsen mucosal damage. Chemotherapy dose modification should be discussed with the oncologist but is not the palliative care team's primary intervention.

101. D — A pneumothorax causing significant dyspnea and distress in a hospice patient may warrant intervention as a symptom-relieving measure consistent with comfort goals. Needle decompression or small-bore chest tube placement can relieve the acute dyspnea, and opioids plus anxiolytics manage residual symptoms. The decision depends on the patient's goals — if symptom relief is the priority, treating a reversible cause of dyspnea is appropriate even in comfort-focused care. "Comfort measures" does not mean "no interventions."

102. B — The statement that hearing may be the last sense preserved in dying patients is well-established in clinical teaching, though definitive evidence is limited. Research using EEG and fMRI in dying patients has shown cortical responses to auditory stimuli even in unresponsive patients. The most honest and helpful response acknowledges the uncertainty ("we don't know for certain") while encouraging the family to speak to the patient, hold their hand, and say whatever they need to say. This guidance is consistently associated with better bereavement outcomes.

103. A — This statement represents the integration of the patient's stated values ("staying at home and being comfortable") with the medical reality (chemotherapy is unlikely to help and would mean more time in the hospital) to arrive at a recommendation — a core component of shared decision-making. The physician is not making the decision for the patient (paternalism) but is offering a recommendation grounded in the patient's own articulated values. The patient retains the right to accept, modify, or reject the recommendation.

104. B — A pathologic fracture of the proximal humerus in a patient with ECOG 2 and 3 months expected survival warrants surgical fixation to relieve pain and restore arm function. Without fixation, the fracture in tumor-weakened bone will not heal, and the patient will have a painful, non-functional arm for her remaining months. Palliative radiation follows surgery to prevent tumor regrowth at the fixation site. Conservative management alone condemns the patient to unnecessary suffering.

105. D — This patient's impaction on a subtherapeutic laxative regimen demonstrates the need for significant escalation. Tolerance to opioid-induced constipation does not develop — the prophylactic regimen must be maintained and titrated proportionally with opioid doses. The escalated regimen should include increased stimulant dosing (senna 4 tablets BID), addition of an osmotic agent (PEG daily), and patient education about the need for lifelong prophylaxis during opioid therapy.

106. C — Nausea that worsens with position changes and movement is classic for vestibular-mediated emesis, transmitted through H1 (histaminergic) and muscarinic receptors from the vestibular system to the vomiting center. Meclizine (an antihistamine) and scopolamine (an anticholinergic) are the most appropriate antiemetics for this mechanism. Prokinetics address gastroparesis, corticosteroids address ICP, and serotonin antagonists address chemotherapy-induced nausea — none of these targets the vestibular pathway.

107. A — Immune-related thyroiditis is one of the most common endocrine irAEs from checkpoint inhibitors. It typically presents as an initial thyrotoxic phase (from thyroid cell destruction releasing stored hormone) followed by hypothyroidism (from permanent thyroid damage). Hypothyroidism is managed with thyroid hormone replacement (levothyroxine) and does not necessarily require discontinuation of immunotherapy — unlike more severe irAEs such as pneumonitis or colitis.

108. B — The clinical findings (crackles, S3, JVD, 4 kg weight gain, edema) clearly indicate decompensated heart failure with volume overload as the cause of worsening dyspnea. Increasing the furosemide dose directly addresses the symptom by reducing the fluid overload causing pulmonary congestion. This is a symptom-directed intervention consistent with comfort goals. Treating dyspnea with opioids alone without addressing the treatable underlying cause would provide suboptimal symptom relief.

109. D — This statement is a clear articulation of the patient's values and goals — comfort and quality time with family are her priorities, not survival prolongation. This should guide all subsequent decisions: treatments that enhance comfort and family time should be pursued; treatments that trade comfort for survival duration should be avoided unless the patient changes her stated priorities. This is the foundation of values-based, patient-centered care planning.

110. C — The elevated calcium (15.2 mg/dL) is causing multiple symptoms simultaneously — confusion, constipation, and potentially contributing to worsening pain. Hypercalcemia causes bone pain, abdominal pain, and can lower the pain threshold, making pre-existing pain harder to control. Treating the hypercalcemia with hydration and bisphosphonates may improve all three symptom domains simultaneously. This represents a reversible cause of multi-symptom deterioration that should not be dismissed as "disease progression."

111. A — Methadone's long, variable half-life (8–59 hours, mean approximately 24 hours) means that tissue levels continue to rise for 5–7 days after initiation. A patient who appears comfortable on day 3 may develop progressive sedation and respiratory depression on days 4–7 as tissue accumulation reaches toxic levels. This is the most dangerous period of methadone initiation, and close monitoring (daily

assessment, instruction to contact the team immediately for sedation) is essential. This delayed toxicity is a high-yield exam topic.

112. B — This response validates the wife's question, provides a clear framework for medication decision-making (preventive medications can often be stopped when prognosis is short; comfort medications are continued), and invites a collaborative review with the physician. This is the appropriate approach to de-prescribing during the transition to end-of-life care — each medication is evaluated individually based on whether it serves the patient's current comfort goals.

113. C — The most critical medication reconciliation concern is verifying the morphine route — was the patient tolerating oral medications at the hospital? If the IV orders were appropriate in the hospital but the patient can now swallow, oral conversion should occur. If the patient cannot swallow, SC conversion is needed. Opioid route errors during transitions are the most dangerous medication-related hazard in palliative care.

114. C — The standard oral-to-intrathecal morphine conversion ratio is approximately 300:1 (oral morphine 300 mg = intrathecal morphine 1 mg). For this patient receiving 300 mg oral morphine equivalent daily: $300 \div 300 = 1$ mg intrathecal morphine per day. This 300-fold dose reduction dramatically reduces systemic side effects while maintaining or improving analgesia — the primary rationale for intrathecal drug delivery in patients with refractory pain and intolerable opioid side effects.

115. A — A patient with decision-making capacity has the absolute right to refuse any medical treatment, including life-sustaining treatment such as dialysis. The nephrologist's belief that dialysis is medically beneficial does not override the patient's informed refusal. This patient has extensive experience with her illness (seven years on dialysis, multiple complications, bilateral amputations, blindness) and has made a deliberate, informed decision. Her refusal must be honored, with appropriate palliative care support for the symptom management that will follow.

116. B — The comfort kit for a COPD patient should include morphine (oral concentrate or injectable) for dyspnea relief and lorazepam for the anxiety component of acute dyspnea episodes. These two medications together address the two primary dimensions of acute dyspnea — the sensation of air hunger (opioid-responsive) and the anxiety/panic that amplifies it (benzodiazepine-responsive). Having both medications immediately available in the home enables rapid response to acute episodes without waiting for a pharmacy delivery or nurse visit.

117. D — Worsening hepatic function reduces first-pass metabolism of oral morphine. Normally, a significant proportion of oral morphine is metabolized during its first passage through the liver before

reaching systemic circulation (oral bioavailability approximately 30%). As liver function declines, first-pass metabolism decreases, allowing a greater proportion of the oral dose to reach systemic circulation. This effectively increases the patient's drug exposure at the same oral dose, producing more sedation without any change in the prescribed dosage.

118. C — Dexamethasone is a well-recognized cause of persistent hiccups, and the temporal relationship (hiccups beginning shortly after the dose was increased from 4 to 8 mg daily) strongly supports this etiology. The most appropriate initial intervention is reducing the dexamethasone dose (back to 4 mg if clinically feasible given the cerebral edema) or switching to an alternative corticosteroid (methylprednisolone may cause fewer hiccups). Adding baclofen as a hiccup-specific treatment is appropriate if dose reduction alone is insufficient.

119. A — Single-fraction palliative radiation (8 Gy) for uncomplicated painful bone metastases provides pain relief beginning within 2–4 weeks in approximately 60–80% of patients, with complete pain relief in 20–30%. Multiple randomized trials have demonstrated equivalent pain relief between single-fraction (8 Gy) and multi-fraction (30 Gy/10 fractions) regimens. The single-fraction approach minimizes treatment burden — one visit instead of 10 — which is particularly important for patients with limited prognosis or poor performance status.

120. B — Auditory experiences of the deceased — hearing their voice, sensing their presence — are common in early bereavement, reported by 30–60% of bereaved individuals. These experiences are not hallucinations or psychotic symptoms. They are a normal part of the grief process, are often experienced as comforting, and typically decrease in frequency over time. The most therapeutic response normalizes the experience, reassures the bereaved person that she is not "going crazy," and provides information about the prevalence of this phenomenon.

121. D — Beginning with the third benefit period (the first 60-day period), Medicare requires a face-to-face encounter with a hospice physician or nurse practitioner within 30 days before the start of the benefit period. This requirement was added to ensure that patients remaining on hospice beyond six months are personally assessed to confirm continued eligibility. The face-to-face encounter was not required during the first two 90-day benefit periods.

122. C — Postprandial nausea with early satiety, bloating, and normal bowel sounds in a patient on opioids strongly suggests gastroparesis — opioid-mediated delayed gastric emptying. Metoclopramide is the ideal antiemetic for this mechanism because it combines CTZ-directed antiemetic activity (D2 antagonism) with prokinetic activity (5-HT₄ agonism) that directly improves gastric motility. It is the only commonly used antiemetic that addresses both the nausea and its underlying cause simultaneously.

123. A — Legacy work — writing letters, creating memory books, recording life stories, making gifts for loved ones — is a healthy, meaning-making activity that many dying patients find profoundly

satisfying. It gives the patient a sense of purpose, allows them to express love, and creates tangible keepsakes for their family. Legacy activities are associated with reduced existential distress and enhanced sense of dignity. They should be encouraged and supported, not pathologized.

124. B — Gabapentin is entirely renally excreted without hepatic metabolism. When renal function declines (creatinine 1.2 to 3.1), gabapentin accumulates, producing dose-dependent toxicity: sedation, confusion, ataxia, and myoclonus. The dose must be reduced proportionally to the GFR decline. At a GFR of approximately 15–30 mL/min, gabapentin dosing should be reduced by 50–75% from the full-function dose. This is one of the most commonly overlooked drug-renal interactions in palliative care.

125. D — The Patchell trial (2005, *Lancet*) demonstrated that surgical decompression followed by postoperative radiation was superior to radiation alone for patients with single-level spinal cord compression, good performance status (ECOG 0–2), and expected survival of at least three months. This patient meets all three criteria: single-level compression at T10, pre-event ECOG 1, and 6–8 month expected survival. Surgery plus radiation preserved or restored ambulatory function in significantly more patients than radiation alone.

126. A — This response addresses the family's emotional concern (fear of starvation), provides accurate medical information (decreased appetite is a natural part of dying), explains the physiology (the body can no longer use nutrition effectively), offers practical guidance (small sips and ice chips for comfort), addresses potential harms (forced feeding can cause nausea and aspiration), and reframes the family's role (presence is more important than food). This is a model response for one of the most common family concerns at end of life.

127. C — Levetiracetam is the optimal anticonvulsant in this polypharmacy palliative care setting because it has no significant hepatic metabolism (avoiding CYP interactions with opioids, corticosteroids, and antiemetics), is available in IV and liquid formulations (essential when the patient may lose swallowing ability), and has a favorable side effect profile. Phenytoin and carbamazepine have extensive CYP interactions that would complicate this patient's already complex medication regimen.

128. B — Metolazone acts on the distal convoluted tubule (blocking sodium reabsorption via the NCC transporter), while furosemide acts on the loop of Henle (blocking the NKCC2 transporter). Adding metolazone provides "sequential nephron blockade" — blocking sodium reabsorption at two different sites — which overcomes the diuretic resistance that develops when compensatory sodium reabsorption in the distal tubule offsets the furosemide effect. This is the standard approach for diuretic-resistant fluid overload.

129. D — Cyproheptadine is the specific pharmacologic antidote for serotonin syndrome. It is a serotonin antagonist (blocking 5-HT_{2A} receptors) that directly counteracts the excessive serotonergic stimulation causing the syndrome. The standard dose is 12 mg orally initially, followed by 4–8 mg every 6 hours. It is available only in oral form, which limits its utility in severely ill patients. Dantrolene treats NMS (not serotonin syndrome), and naloxone reverses opioid effects but not serotonin toxicity.

130. A — This response leads with empathy ("I can hear how much you want to keep fighting"), validates the patient's character ("that tells me a lot about who you are"), engages with her interest without dismissing it ("let's talk about what you've read"), and ensures comprehensive symptom management regardless of her decision about the trial. It balances respect for autonomy with clinical responsibility and avoids both false hope and premature closure.

131. C — The decision about surgical intervention in a hospice patient should be guided by whether the procedure would relieve distressing symptoms (the contained perforation and abscess are causing pain, fever, and potentially sepsis), whether the expected benefit outweighs the procedural risk and recovery burden, and whether the intervention aligns with the patient's goals of care and current functional status. Surgery is not categorically excluded from hospice — comfort-directed procedures may be appropriate.

132. B — Using the standard 3:1 oral-to-parenteral conversion for morphine: 330 mg oral \div 3 = 110 mg parenteral (SC) morphine per 24 hours. No cross-tolerance reduction is applied because this is the same drug (morphine) being converted to a different route, not a rotation to a different opioid. The 110 mg/24h SC converts to approximately 4.6 mg/hour as a continuous infusion, with breakthrough doses of 10–15 mg SC every 2–3 hours as needed.

133. D — The chaplain's role in spiritual distress is to provide pastoral presence and spiritual exploration — not to prescribe medications, diagnose psychiatric conditions, or provide theological correction. The patient's feeling of divine abandonment is a genuine spiritual crisis that requires compassionate exploration, validation, and engagement with his faith tradition on his own terms. The chaplain should facilitate his process of making meaning from his suffering, not impose a predetermined theological resolution.

134. A — The ganglion impar (ganglion of Walther) is a solitary retroperitoneal ganglion located anterior to the sacrococcygeal junction. It transmits visceral afferent pain signals from the perineum, rectum, anus, distal vagina, and vulva. The ganglion impar block is specifically indicated for perineal and rectal cancer pain — the exact location of this patient's tumor-related neuropathic pain. It is a relatively simple, low-risk procedure compared to celiac plexus or superior hypogastric plexus blocks.

135. C — Fluctuating function — good days alternating with bad days within an overall declining trajectory — is the hallmark of the organ failure (Trajectory 2) illness pattern. COPD and heart failure characteristically oscillate between better and worse function while the overall trend is downward. Good days do not indicate recovery; they reflect the inherent variability within this trajectory type. This is an important concept for family education to prevent misinterpretation of temporary improvement as recovery.

136. B — Opioid-induced pruritus results from two mechanisms: histamine release from mast cells (particularly with morphine, which is a potent histamine releaser) and central mu-opioid receptor activation producing a central itch signal. The temporal relationship to the morphine dose increase supports this etiology. Management includes opioid rotation to fentanyl (minimal histamine release), antihistamines for the peripheral component, or low-dose nalbuphine for refractory cases. His normal bilirubin excludes cholestatic pruritus.

137. D — Topical metronidazole 0.75% gel is the most effective intervention for malodor from fungating wounds. The malodor is produced by anaerobic bacteria colonizing the wound surface, and metronidazole specifically targets anaerobic organisms. It can be applied directly to the wound bed or crushed tablets can be mixed into wound gel. The dramatic reduction in odor — often within 24–48 hours — can transform the patient's social experience and the family's willingness to be present.

138. A — Pre-medication with opioids and benzodiazepines is the most critical preparatory step for LVAD deactivation. Once the LVAD is stopped, cardiac output will cease and death will follow within minutes. The patient must be comfortable and adequately sedated before deactivation occurs. A court order is not required — the patient has documented his wishes clearly, and his surrogate confirms them. LVAD deactivation is ethically and legally equivalent to withdrawal of any other life-sustaining therapy.

139. C — A patient may revoke hospice at any time to pursue disease-directed therapy, and may re-elect hospice in the future if she chooses. Hospice revocation is the patient's right and does not require justification, approval, or permanence. This preserves patient autonomy and ensures that hospice enrollment — which should be a source of support — never becomes a barrier to accessing treatments the patient values.

140. B — This patient has opioid neurotoxicity (confusion, myoclonus) from metabolite accumulation in the setting of progressive renal impairment. Fentanyl is the preferred opioid in renal failure because it is metabolized by CYP3A4 to inactive norfentanyl — no active metabolites accumulate. Oxycodone metabolites (including oxymorphone via CYP2D6) accumulate in renal failure. Meperidine is never appropriate in palliative care due to its neurotoxic metabolite normeperidine.

141. D — Dexamethasone is a well-recognized cause of persistent hiccups, and the temporal relationship (onset during dexamethasone therapy, three weeks after initiation) strongly supports this etiology. Corticosteroid-induced hiccups are among the most common medication-related causes of this symptom in palliative care. Management includes dose reduction, switching to an alternative corticosteroid, or adding baclofen as a hiccup-specific treatment.

142. A — This response leads with empathy and emotional validation ("I can hear how frightened you are"), acknowledges the daughter's love for her father, and then opens exploration ("Can you help me understand what worries you most?"). The daughter's anger is almost certainly driven by fear, grief, and helplessness — responding to the emotion underlying the anger rather than to the surface demand is the most effective way to de-escalate the conflict and begin productive dialogue.

143. C — Vertebroplasty and kyphoplasty provide rapid pain relief for vertebral compression fractures — studies report significant improvement in 70–90% of patients within 24–72 hours. The mechanism is fracture stabilization with polymethylmethacrylate cement injection. This patient has a specific, localized compression fracture with acute, severe pain and adequate performance status and life expectancy to benefit. Single-fraction radiation also helps but has a slower onset (2–4 weeks).

144. B — Anticholinergic agents (atropine, glycopyrrolate, scopolamine) reduce NEW secretion production by blocking muscarinic receptors in salivary and bronchial glands, but they do NOT dry EXISTING accumulated secretions. Secretions that have already pooled in the oropharynx will continue to produce noise until they are reabsorbed, drain by gravity (with repositioning), or evaporate. This explains why the death rattle may persist for hours even after anticholinergic administration — the medication prevents the problem from getting worse but cannot immediately reverse what has already accumulated.

145. D — Albumin replacement after large-volume paracentesis is a practice specific to cirrhotic (portal hypertensive) ascites, where rapid fluid removal causes intravascular volume depletion and activation of the renin-angiotensin-aldosterone system, leading to post-paracentesis circulatory dysfunction. Malignant ascites from peritoneal carcinomatosis has a different pathophysiology, and routine albumin replacement is not required. This distinction is clinically important and saves the patient unnecessary intervention and expense.

146. A — Atorvastatin provides cardiovascular risk reduction over a timeframe of years — far exceeding this patient's 6–8 week prognosis. It offers no symptom benefit. Discontinuing it eliminates a medication that provides no meaningful benefit while reducing pill burden, avoiding drug interactions, and eliminating the (small) risk of statin-related side effects. Furosemide (symptom relief for dyspnea),

morphine (symptom relief for breathlessness), and senna-docusate (constipation prevention) all serve comfort goals and should be continued.

147. C — Dexamethasone is available in injectable form (IV or SC) with equivalent systemic bioavailability to the oral dose. Converting to SC dexamethasone 8 mg daily provides the same systemic effect without requiring oral intake. This is one of the most practical route conversions in palliative care. Abrupt discontinuation of dexamethasone after more than 1–2 weeks risks adrenal crisis from HPA axis suppression — a taper is needed if discontinuation is planned, but the question asks about route conversion, not discontinuation.

148. B — The combination of unexplained bruising in a pattern consistent with handgrip marks, an obtunded patient who cannot self-report, and a cohabitant with substance use history raises significant concern for elder abuse. Health care providers are mandatory reporters of suspected elder abuse in all 50 states. The appropriate response is assessment (private patient evaluation, looking for additional signs), documentation, and reporting to adult protective services if abuse is suspected. Waiting for more evidence before acting puts the patient at ongoing risk.

149. D — This patient's hyperglycemia is causing distressing symptoms (polyuria disrupting sleep, excessive thirst, blurred vision) that significantly impair his quality of life. In hospice, glucose management is not about preventing long-term microvascular complications — it is about relieving current symptom burden. The approach should balance glucose management against the appetite benefit of dexamethasone: consider reducing the dexamethasone dose, adding insulin for symptom relief, or both.

150. A — This statement reflects the patient's need for autonomy, agency, and recognition as a person who is still present and capable. Serious illness often leads family members and clinicians to inadvertently bypass the patient in conversations and decisions — a phenomenon that can be experienced as a loss of personhood. The palliative care team should ensure that the patient remains the center of her own care, that her voice is actively sought, and that decisions are made with her, not just about her.

151. C — If biliary stenting would relieve the distressing pruritus — a symptom that is significantly impairing the patient's quality of life — it may be appropriate as a comfort-directed intervention within the hospice plan of care. The decision weighs the expected symptom benefit against the procedural risk, burden, and the patient's goals. "Comfort measures" does not mean "no procedures" — it means every intervention is evaluated based on whether it serves the patient's comfort.

152. B — Multiple randomized controlled trials have demonstrated that a single fraction of 8 Gy provides pain relief equivalent to multi-fraction regimens (30 Gy/10 fractions) for uncomplicated painful bone metastases, with response rates of 60–80% and complete relief in 20–30%. Single-fraction radiation minimizes treatment burden — one visit instead of 10–20 — which is especially important for patients with limited prognosis and reduced performance status.

153. D — This response provides comprehensive anticipatory guidance: identifies the breathing pattern (Cheyne-Stokes), normalizes it as part of dying, addresses the family's primary fear (suffocation), provides reassurance (not in distress), commits to continued presence and comfort management, and explicitly tells the family not to call 911. Clear, compassionate, and medically accurate guidance during the dying process reduces family panic and prevents unnecessary emergency interventions.

154. A — A venting gastrostomy allows the patient to eat and drink small amounts for pleasure — the food enters the stomach and the patient experiences the taste, texture, and social ritual of eating. The food is then drained through the gastrostomy rather than passing into the obstructed bowel and causing distension and vomiting. This quality-of-life benefit is one of the most important advantages of venting gastrostomy over chronic NG tube drainage.

155. C — Using the standard 3:1 oral-to-parenteral ratio for morphine: $18 \text{ mg IV} \times 3 = 54 \text{ mg oral morphine per 24 hours}$. This is prescribed as sustained-release morphine approximately 27 mg every 12 hours (rounded to the nearest available tablet size). Breakthrough dosing should be provided at 10–15% of the total daily dose (approximately 5–8 mg oral morphine IR every 2–4 hours as needed).

156. D — Tramadol has serotonin reuptake inhibition activity in addition to its weak mu-opioid agonism. Combined with duloxetine (an SNRI that also increases serotonergic tone), the two drugs produce excessive serotonergic stimulation causing serotonin syndrome. The clinical features — agitation, hyperthermia, clonus, diaphoresis — are classic. Morphine has minimal serotonergic activity and is not the primary culprit. This drug interaction is one of the most important and most tested in palliative care pharmacology.

157. B — Complicated Grief Treatment (CGT), developed by M. Katherine Shear, is the most extensively studied and evidence-supported psychotherapy for prolonged grief disorder. It is a 16-session, manualized treatment combining elements of interpersonal psychotherapy, CBT, and motivational interviewing. Response rates of 50–70% in randomized controlled trials significantly exceed those of standard interpersonal psychotherapy or antidepressant medication alone for PGD.

158. A — An indwelling pleural catheter (IPC) is the most appropriate long-term management for recurrent malignant pleural effusion in a patient with adequate performance status and months of expected survival. IPCs allow intermittent home drainage by the patient or caregiver, eliminating repeated clinic-based thoracenteses. This significantly reduces treatment burden while maintaining effective symptom control. Diuretics are ineffective for malignant pleural effusions.

159. C — Celiac plexus neurolysis achieves significant pain relief in 70–90% of patients with pancreatic cancer pain and substantially reduces opioid requirements. Evidence supports early consideration — not relegation to last-resort status after all other options have failed. Early celiac plexus neurolysis provides better pain control, fewer opioid side effects, and potentially improved quality of life compared to systemic opioid dose escalation alone. The deep, boring, back-radiating epigastric pain in this patient is the classic indication.

160. D — The standard for confirming cardiac death requires auscultation of the precordium for heart sounds for at least one full minute. Brief auscultation may miss faint or intermittent cardiac activity. The one-minute standard provides sufficient time to detect even very weak heart sounds or irregular rhythms that might indicate the patient is not yet dead. Combined with assessment for absent respiratory effort, absent pupillary response, and absent response to stimulation, this constitutes the complete death pronouncement examination.

161. B — Anticoagulation for a mechanical heart valve carries the highest risk of discontinuation among all anticoagulation indications. Mechanical valves without anticoagulation have a significant risk of valve thrombosis and systemic embolization (including stroke). Unlike anticoagulation for atrial fibrillation (where short-term risk is negligible), the risk with mechanical valves is immediate and substantial. Warfarin should generally be continued as long as the patient is taking oral medications, with transition to subcutaneous LMWH when oral intake ceases.

162. A — Severe diarrhea with bloody stool in a patient on ipilimumab (anti-CTLA-4), with negative infectious workup, is classic immune-related colitis — one of the most serious GI irAEs. Ipilimumab carries the highest risk of immune-related colitis among checkpoint inhibitors. Treatment requires prompt systemic corticosteroids (prednisone 1–2 mg/kg/day), holding of immunotherapy, and consideration of infliximab for steroid-refractory cases. Delayed treatment can lead to colonic perforation.

163. D — Once the device representative has permanently reprogrammed the ICD to disable shock delivery, the magnet is no longer needed and can be removed. The magnet provides only temporary suspension — it does not reprogram the device. The permanent reprogramming performed by the device representative disables the shock function through the device software, which persists regardless of whether the magnet is present.

164. D — Bilateral pitting edema with very low serum albumin (1.8 g/dL) and absent cardiac findings (no JVD, no crackles) indicates hypoalbuminemic edema — decreased oncotic pressure from severe hypoalbuminemia allows intravascular fluid to shift into the interstitial space. Cancer cachexia and malnutrition are the most common causes of severe hypoalbuminemia in palliative care. This type of edema responds poorly to diuretics (which address intravascular volume, not oncotic pressure) and may require albumin infusion for temporary improvement.

165. B — This patient has a multi-month prognosis, is enjoying quality of life, and has a symptomatic infection (dysuria, pain, fever) that antibiotics can effectively relieve. Treating the UTI with an appropriate oral antibiotic is consistent with comfort-focused goals because it directly addresses distressing symptoms. The decision is guided by whether the antibiotic serves the patient's comfort — not by a blanket policy of treating or withholding antibiotics in hospice.

166. A — Opioid-induced myoclonus is a dose-dependent neurotoxic effect resulting from accumulation of neuroexcitatory opioid metabolites or from direct opioid effects on spinal cord motor neurons. With normal renal function, myoclonus at moderate opioid doses suggests intrinsic sensitivity rather than metabolite accumulation. Management follows a stepwise approach: dose reduction if pain control allows, opioid rotation to fentanyl (no neuroexcitatory metabolites), and/or symptomatic treatment with clonazepam or lorazepam.

167. C — Duloxetine is a potent inhibitor of CYP2D6 — the enzyme required to convert tamoxifen to its active metabolite endoxifen. Concurrent use of duloxetine reduces endoxifen levels, potentially decreasing tamoxifen's anticancer efficacy. This is a clinically significant drug interaction that should be avoided in patients on tamoxifen. Gabapentin and pregabalin have no significant CYP interactions and are safe alternatives for neuropathic pain in tamoxifen-treated patients.

168. D — This patient has experienced four episodes of aspiration pneumonia in 12 months — a pattern that reflects the natural trajectory of advanced dementia with progressive dysphagia and loss of protective reflexes. Each antibiotic course treats the acute infection but does not change the underlying aspiration risk, which will produce recurrent episodes. The most important consideration is whether treating this fourth episode serves comfort goals (relieving distressing symptoms) or merely prolongs the dying process without improving quality of life.

169. B — Uremic myoclonus — involuntary jerking movements from metabolic encephalopathy in renal failure — is distinct from seizures and is effectively managed with benzodiazepines (lorazepam or clonazepam) rather than traditional anticonvulsant loading. Lorazepam 0.5–1 mg sublingually or clonazepam 0.5 mg twice daily suppresses the myoclonic movements and improves the patient's comfort. Anticonvulsant loading with phenytoin is unnecessary and carries significant side effect risk.

170. A — "Cardiac arrest" is the mechanism of death common to virtually all deaths — every death involves cessation of cardiac function. Listing it as the cause of death provides no information about why the patient died. The death certificate should specify the disease process: "Respiratory failure" (Line a) due to "Metastatic prostate cancer" (Line b). The underlying cause on the lowest completed line is used for public health statistics and must accurately reflect the true cause of death.

171. C — A terminal rally (terminal lucidity) is a transient, poorly understood period of unexpected improvement that may occur hours to days before death. The patient may become alert, conversant, and engaged after a period of obtundation — sometimes dramatically so. The rally does not indicate recovery; it is typically followed by rapid decline and death. Families should be gently informed that while this may be a precious gift of connection, the underlying trajectory has not changed.

172. D — At subanesthetic doses used for pain management (0.1–0.5 mg/kg/hour), the most relevant ketamine adverse effects are dissociative symptoms (vivid dreams, hallucinations, feeling of detachment from reality), dizziness, nausea, and emergence reactions. These neuropsychiatric effects may be distressing and can be minimized by concurrent low-dose benzodiazepine administration. Patients should be counseled about these expected effects before ketamine is initiated.

173. B — When a cognitively intact patient explicitly and autonomously decides to delegate information management and decision-making authority to a family member, honoring this delegation IS respecting the patient's autonomy. The patient is not being denied information — she is choosing, based on her cultural values, how she wants information to be handled. Insisting on direct disclosure against her expressed preference would violate her autonomy, not protect it.

174. A — Handgrip-pattern bruising on the upper arms of a vulnerable elderly patient living with a person who has substance use history raises significant concern for physical elder abuse. The hospice nurse should conduct a private assessment with the patient (away from the grandson), look for additional signs of abuse or neglect, document findings carefully, and report to adult protective services if abuse is suspected. All health care providers are mandatory reporters of suspected elder abuse.

175. A — Survival beyond the initial six-month estimate is common and does not indicate diagnostic error or hospice ineligibility. The six-month prognosis is a clinical estimate — not a deadline. Many patients survive longer than expected, and this reflects prognostic uncertainty, not misdiagnosis. As long as the clinical trajectory continues to support the prognosis, the patient can remain on hospice through recertification.

176. D — The Patchell trial demonstrated that surgical decompression followed by postoperative radiation is superior to radiation alone for patients with single-level spinal cord compression, good pre-

morbid performance status, and expected survival of at least three months. This patient meets all criteria: single-level compression at T7, ECOG 1 before onset, and 8-month expected survival. Despite her current neurologic deficits, urgent surgery offers the best chance of functional recovery.

177. B — This patient has morphine neurotoxicity from accumulation of the active metabolite M6G due to declining renal function (creatinine 1.0 to 3.8). M6G is a potent mu agonist that is renally excreted — when renal clearance declines, M6G accumulates and causes the classic triad of confusion, hallucinations, and myoclonus. Fentanyl, metabolized by CYP3A4 to inactive norfentanyl, has no active metabolites and is the safest opioid in renal failure.

178. A — Asking "What is your understanding?" before delivering medical information is the "Perception" step of the SPIKES protocol applied to the family meeting context. This question reveals what the family already knows, identifies gaps in understanding and misconceptions that need correction, and provides a natural starting point for the medical update. It prevents the common error of providing information the family already has or delivering a medical update that starts at the wrong level of detail.

179. C — Current evidence does NOT support routine protein restriction for hepatic encephalopathy. Systematic reviews and clinical practice guidelines now recommend adequate protein intake (1.2–1.5 g/kg/day) rather than restriction. Protein restriction worsens sarcopenia and malnutrition — both already significant problems in patients with advanced liver disease — without improving encephalopathy outcomes. Branched-chain amino acid supplementation may be considered as an alternative to standard protein in rare cases.

180. D — A handheld fan directed at the face has demonstrated efficacy equivalent to supplemental oxygen for reducing subjective dyspnea in studies of non-hypoxemic patients. The mechanism involves stimulation of trigeminal nerve afferents (V2 and V3 branches) in the nasal mucosa and cheeks, which modulates the central perception of breathlessness. However, this patient IS hypoxemic (SpO₂ 88%), so supplemental oxygen may also be beneficial. Among the non-pharmacologic options listed, the fan has the strongest evidence base.

181. A — Mirtazapine at 15 mg (the lower dose is more sedating due to preferential antihistamine activity) provides antidepressant efficacy while simultaneously promoting sleep through H₁ antagonism and stimulating appetite through 5-HT_{2C} and H₁ blockade. This addresses all three symptoms — depression, insomnia, and poor appetite — with a single medication, reducing polypharmacy. It has a faster onset of sleep and appetite effects (days) than its antidepressant effect (1–2 weeks).

182. B — This patient has acute airway obstruction from tumor encroachment causing stridor and severe dyspnea. He is on comfort measures with a DNR. The immediate priorities are symptom relief: morphine for air hunger, midazolam for terror, upright positioning to optimize remaining airflow, and heliox (if available) to reduce turbulent flow resistance. If the obstruction is complete and irreversible, proportional palliative sedation prevents the patient from experiencing conscious suffocation.

183. D — A median length of stay of 11 days and 42% of patients dying within 7 days of enrollment indicate that patients are being referred to hospice very late in their disease course — too late to receive the full benefit of hospice services. Late referral deprives patients of weeks to months of symptom management, psychosocial support, spiritual care, and family preparation. This is a recognized quality concern and a target for improvement through earlier palliative care consultation and hospice referral.

184. C — Hepatic capsule pain is caused by distension and inflammation of Glisson's capsule by expanding liver metastases. Dexamethasone directly addresses this mechanism by reducing hepatic inflammation and peritumoral edema, thereby decreasing capsular stretch. It is one of the most effective non-opioid interventions for this specific pain syndrome. The anti-inflammatory effect provides more targeted and sustained relief than NSAIDs for this particular pain mechanism.

185. A — Grimacing during repositioning in an unresponsive patient may indicate pain — and treating possible pain is always preferable to allowing potential suffering. A pre-emptive morphine dose before repositioning, with monitoring for improvement in grimacing and other distress signs, represents the appropriate approach. Even when certainty about pain is impossible (the patient cannot self-report), the ethical default is to treat rather than to risk undertreated suffering.

186. B — This presentation (decreased ostomy output, abdominal distension, nausea, dusky stoma) in a patient with known colon cancer suggests bowel obstruction — likely from tumor progression or adhesive disease. For a comfort-focused patient who is not a surgical candidate, the standard medical management of inoperable MBO applies: octreotide (reduces GI secretions), anticholinergics (reduces secretions and colicky pain), dexamethasone (reduces peritumoral edema), and parenteral opioids. Metoclopramide is contraindicated in complete obstruction.

187. D — Prophylactic anticonvulsants are NOT recommended for patients with brain metastases who have not had seizures. Randomized trials have not demonstrated a reduction in first-seizure incidence with prophylactic therapy, and anticonvulsant medications carry significant side effect risks (sedation, cognitive impairment, drug interactions, rash, hepatotoxicity). Anticonvulsant therapy should be initiated only after a seizure has occurred.

188. A—. When initial opioid dosing does not adequately control dyspnea, repeating the morphine dose and adding midazolam for the anxiety component is the appropriate escalation. The anxiety-breathlessness cycle — where dyspnea triggers anxiety, and anxiety worsens the perception of dyspnea — often requires both opioid (for the dyspnea sensation) and benzodiazepine (for the anxiety amplification) to break. Nebulized albuterol alone is insufficient for comfort-focused management of refractory dyspnea..

189. A — The clinical features — deep, poorly localized, cramping/squeezing pelvic pain with autonomic accompaniments (nausea, diaphoresis) — are classic for visceral nociceptive pain arising from pelvic visceral structures. Visceral pain is transmitted through the autonomic nervous system, explaining the poor localization, the quality descriptors, and the autonomic features. This classification guides treatment selection — visceral pelvic pain may benefit from a superior hypogastric plexus block in addition to opioid therapy.

190. B — Daily crying at two months after a parent's death is completely within the range of normal grief. Grief waves — sudden, intense surges of sadness triggered by unexpected reminders — are a hallmark of normal bereavement and can occur for months or years. The fact that the son is functioning adequately in most areas indicates healthy adaptation. Normalizing his experience and reassuring him that there is no timeline for grief reduces the shame and self-doubt that bereaved people often feel.

191. D — Treatment of this patient's hyperglycemia is warranted for symptom relief, not for long-term glucose control. His polyuria (causing nighttime awakenings and disrupted sleep), excessive thirst, and blurred vision (preventing him from watching television — his primary enjoyment) are directly caused by hyperglycemia and are significantly impairing his comfort and quality of life. Insulin therapy targeting moderate glucose control (not strict HbA1c targets) can meaningfully improve these symptoms.

192. C — A terminal rally is a transient period of unexpected alertness and engagement that can occur in the final days before death. It is poorly understood but is well-recognized by experienced clinicians. The most compassionate and honest explanation acknowledges the phenomenon, explains that it does not indicate recovery, frames it as a gift (a final opportunity for meaningful connection), and prepares the family for the decline that typically follows.

193. A — The correct death certificate format lists the immediate cause (aspiration pneumonia, Line a), the condition leading to it (dysphagia, Line b), and the underlying cause initiating the chain (Parkinson's disease, Line c). The underlying cause on the lowest completed line — Parkinson's disease — is used for public health statistics. "Cardiac arrest," "old age," and "natural causes" are unacceptable as causes of death because they provide no information about the disease process.

194. B — Methylphenidate is the pharmacologic agent with the strongest evidence for cancer-related fatigue. It is a CNS stimulant with rapid onset (hours), allowing quick assessment of benefit. Dosing starts at 5 mg in the morning and at noon, titrated upward based on response. Evening doses are avoided to prevent insomnia. Modafinil has mixed evidence. Dexamethasone provides short-term benefit but is not sustained. Her hemoglobin of 11.2 is unlikely to be the primary cause of her fatigue.

195. D — Peritonitis from bacterial contamination is the most significant potential complication of indwelling peritoneal catheters. Infection can occur from skin organisms tracking along the catheter, from contamination during drainage procedures, or from translocation of gut bacteria. Patient and family education about strict sterile technique, recognition of infection signs (fever, abdominal pain, cloudy drainage), and prompt reporting is essential for safe home management.

196. C — Tolerance — the need for higher doses to achieve the same effect — does develop with chronic opioid use. However, in cancer patients, dose increases are needed primarily because the disease is progressing (larger tumors, new metastases, advancing bone disease) and causing more pain, not solely because of pharmacologic tolerance. This distinction matters because it reassures patients that their increasing opioid needs are appropriate responses to a progressing disease, not evidence of addiction or treatment failure.

197. A — This response validates the patient's atheism without judgment, redefines spiritual care beyond religion (meaning, purpose, legacy, connection), and offers support on the patient's own terms. Spiritual care in palliative care addresses universal human concerns — not exclusively religious ones — and is relevant to patients of all belief systems, including those with no religious affiliation. The chaplain's role is to meet the patient where they are, not to impose a spiritual framework.

198. B — Medication review is the single most important and most actionable first step in managing acute delirium in palliative care. This patient's acute change in mental status (alert yesterday, confused and agitated today) is classic for delirium — and opioids, benzodiazepines, anticholinergics, and corticosteroids are the most common medication causes. Identifying and modifying the offending medication may resolve the delirium without additional pharmacotherapy. Always review medications before reaching for haloperidol.

199. D — NSAIDs are specifically effective for bone metastasis pain because they inhibit prostaglandin synthesis at the site of bony tumor involvement. Bone metastases produce abundant prostaglandins that sensitize peripheral nociceptors and drive the inflammatory component of bone pain. The addition of an NSAID to opioid therapy provides a meaningful opioid-sparing effect specific to bone pain that is not achieved by acetaminophen, gabapentinoids, or SNRIs, which target different pain mechanisms.

200. C — Sertraline modulates central serotonergic pathways involved in cholestatic pruritus. Serotonin plays a role in central itch processing — serotonergic neurotransmission in the brainstem and spinal cord modulates the perception of itch signals. SSRIs have demonstrated efficacy for cholestatic pruritus through this central mechanism in several clinical studies. This represents a distinct mechanism from cholestyramine (bile acid binding), rifampin (bile acid metabolism), and naltrexone (opioid receptor blockade).

201. A — The convergence of multiple end-of-life signs — anuria for 14 hours, mottling extending to mid-thighs, cool extremities, loss of radial pulse, obtundation, and irregular breathing with apneic pauses — indicates active dying with death likely within hours. When three or more of these signs cluster together, the probability of death within 72 hours is very high. The family should be informed with compassion, comfort measures optimized, and family presence facilitated.

202. B — Palliative care consultation is appropriate and should be offered concurrently with clinical trial participation. There is no ethical, medical, or regulatory prohibition against combining palliative care with investigational therapy. Better symptom management through palliative care may actually improve the patient's ability to tolerate and continue trial participation. The goals of palliative care (symptom management, quality of life) complement rather than conflict with the goals of clinical research.

203. D — Proportional palliative sedation requires four prerequisites: (1) confirmation that the symptom is truly refractory (standard treatments have been optimized and failed), (2) the patient is imminently dying (hours to days), (3) goals of care are aligned with the patient and/or family, and (4) the decision is thoroughly documented. PPS is the intervention of last resort — not a substitute for expert symptom management — and these prerequisites ensure that it is used appropriately.

204. C — The single most important prognostic factor in malignant spinal cord compression is the patient's neurologic status at the time treatment is initiated. Patients who are still ambulatory when treatment begins have greater than 80% chance of remaining ambulatory. Patients who are paraplegic at treatment onset have less than 10% chance of regaining function. This is why MSCC is a true emergency — every hour of delay risks irreversible neurologic loss.

205. D — The shock function and pacing function of modern ICDs can be independently programmed. Deactivating the shock function while maintaining pacing is a standard, routine capability — the most commonly employed approach for hospice patients who want to avoid painful shocks but benefit from pacing that prevents symptomatic bradycardia.

206. B — Opioid-induced nausea from CTZ stimulation typically develops within the first few days of opioid initiation or dose increase and resolves within 3–7 days as tolerance to the emetogenic effect develops. The constant, non-positional, non-meal-related pattern in a patient who started morphine 3 weeks ago (and is now at 2 days of nausea) is classic. A short course of haloperidol 0.5–1 mg every 8 hours for 5–7 days should bridge the tolerance development period.

207. A — Furosemide is being prescribed as a comfort medication — it directly relieves dyspnea caused by pulmonary congestion from fluid overload. The fact that it also treats the underlying heart failure does not change its primary function in this context: symptom relief. Medications that provide direct symptom relief are covered under the hospice per diem regardless of whether they are classified as "disease-directed."

208. C — Burning, shooting, electric-shock-like pain with numbness — the neuropathic pain descriptors — requires adjuvant analgesics that target the specific neuropathic mechanism. Gabapentinoids (gabapentin, pregabalin) and SNRIs (duloxetine) are first-line adjuvant analgesics for neuropathic pain. They modulate pain transmission through voltage-gated calcium channel blockade (gabapentinoids) or enhancement of descending inhibitory pathways (SNRIs). NSAIDs target inflammatory pain, not neuropathic mechanisms.

209. A — Clinician grief — sadness and emotional response to the loss of a patient with whom the clinician had a meaningful relationship — is a normal, healthy response that should be acknowledged, normalized, and supported. It reflects the emotional engagement that makes hospice work meaningful, not a failure of professional boundaries. Team debriefing, emotional support, and access to employee assistance programs help clinicians process their grief without accumulating unresolved distress.

210. B — Denosumab is a monoclonal antibody that blocks RANKL (receptor activator of nuclear factor kappa-B ligand), the key signaling molecule required for osteoclast differentiation and activation. By blocking RANKL, denosumab prevents the formation and function of bone-resorbing osteoclasts, reducing skeletal-related events and potentially reducing bone pain. This mechanism is distinct from bisphosphonates (which inhibit osteoclasts through a different pathway involving the mevalonate pathway).

211. D — When multiple end-of-life signs converge (oliguria/anuria, mottling extending to thighs, irregular breathing with apnea, minimal responsiveness), the clinical priority shifts from monitoring and treatment to communication, comfort optimization, family support, and facilitation of the dying process. The family needs clear information that death is approaching, reassurance that comfort will be maintained, and support for whatever they need — whether that is time at the bedside, privacy, spiritual care, or practical guidance.

212. C — In catastrophic hemorrhage in a comfort-focused patient, the highest priority is rapid sedation to eliminate the patient's conscious terror. Midazolam from the comfort kit provides sedation within minutes. Hemostatic measures cannot control massive rectal hemorrhage from tumor erosion in the home setting. The clinical team's role is to ensure that the patient's final minutes are spent in unconscious peace rather than conscious horror. Having the comfort kit immediately available makes this intervention possible.

213. A — This response is honest about the expected time course (minutes to hours given his high ventilatory requirements and hemodynamic instability), acknowledges uncertainty ("I cannot predict the exact time"), commits to comfort and presence, and prepares the family for what they will experience. It avoids both false precision ("exactly 5 minutes") and unhelpful vagueness ("impossible to predict"). Families need an honest range with a commitment to ongoing support.

214. B — This husband has multiple established risk factors for complicated bereavement: prior depression, high dependency on the deceased, and limited social support. Enhanced, proactive bereavement support — more frequent contacts than standard protocol, early connection with counseling resources, active monitoring for depression and complicated grief, and facilitated referral for individual therapy if symptoms emerge — gives him the best chance of healthy bereavement adjustment.

215. D — Immune-related thyroiditis progressing to hypothyroidism is one of the most common endocrine irAEs from checkpoint inhibitors. The markedly elevated TSH and undetectable free T4 confirm hypothyroidism. Treatment is straightforward thyroid hormone replacement with levothyroxine. Unlike more severe irAEs (pneumonitis, colitis, hepatitis), hypothyroidism typically does not require immunotherapy discontinuation — it is managed with ongoing hormone replacement while immunotherapy continues.

216. C — When a patient can no longer swallow tablets but can still take small liquid volumes, each medication should be converted to the most appropriate non-tablet formulation: morphine SR converts to concentrated oral morphine solution (20 mg/mL), gabapentin converts to liquid formulation, dexamethasone converts to SC injectable, and senna converts to liquid or suppository. Crushing morphine SR is dangerous (destroys sustained-release mechanism). A systematic route conversion for each medication is essential.

217. A — This response validates the patient's question, explains why individual comparisons are unreliable ("every person's cancer is different"), offers honest communication about his specific situation, and invites further discussion. It avoids both false hope ("you could live two years") and dismissive deflection ("I can't tell you anything"). The commitment to honesty and collaborative planning respects the patient's autonomy and intelligence.

218. B — Using the standard 3:1 oral-to-parenteral ratio for morphine: $120 \text{ mg oral} \div 3 = 40 \text{ mg parenteral (SC) morphine per 24 hours}$, which equals approximately 1.7 mg/hour as a continuous infusion. No cross-tolerance reduction is applied because this is the same drug being converted to a different route, not a rotation to a different opioid. Breakthrough dosing should be provided at 10–15% of the total daily dose (4–6 mg SC every 2–3 hours PRN).

219. D — This patient has failed optimized conventional laxative therapy (stimulant plus osmotic agent at adequate doses) for opioid-induced constipation. The next step is a peripherally acting mu opioid receptor antagonist (PAMORA) — methylnaltrexone, naloxegol, or naldemedine — which blocks mu receptors in the GI tract without crossing the blood-brain barrier, reversing the peripheral constipating effects of opioids without affecting central analgesia. PAMORAs are specifically indicated for OIC refractory to conventional laxatives.

220. C — A pathologic fracture of the proximal humerus in a patient with ECOG 2 and 4 months expected survival warrants surgical fixation followed by palliative radiation. Without fixation, the fracture in tumor-weakened bone will not heal, leaving the patient with a painful, non-functional arm. Surgical fixation restores arm function, relieves pain, and is followed by radiation to prevent tumor regrowth at the fixation site. Conservative management condemns the patient to unnecessary suffering.

221. A — Moral distress occurs when a clinician knows what she believes is the ethically right course of action (starting sedation earlier) but feels unable to carry it out due to hierarchical barriers (the attending's decision to try another medication). This causes anguish, frustration, and a sense of powerlessness — the defining characteristics of moral distress. Compassion fatigue relates to empathic engagement with patient suffering, and burnout relates to organizational workload factors — both distinct constructs.

222. B — The parenteral-to-oral conversion ratio for hydromorphone is 1:5 ($1.5 \text{ mg parenteral} = 7.5 \text{ mg oral}$). To convert from IV to oral: $12 \text{ mg IV} \times 5 = 60 \text{ mg oral hydromorphone per 24 hours}$. This can be prescribed as hydromorphone 10 mg every 4 hours or converted to an equivalent extended-release formulation with breakthrough dosing. The 5:1 ratio for hydromorphone (distinct from morphine's 3:1 ratio) is a high-yield calculation point.

223. D — This response embodies the core palliative care principle that living fully — pursuing meaningful activities, maintaining connections, and participating in important life events — is entirely consistent with hospice enrollment. The nurse's role is to facilitate the patient's goals, not to restrict them. Practical support (medication planning, equipment arrangement, contingency planning) enables the patient to attend the graduation safely and comfortably.

224. C — Furosemide causes renal sodium and potassium wasting, which can produce hyponatremia (sodium 126) and hypokalemia (potassium 2.8). These electrolyte derangements manifest clinically as confusion (hyponatremia) and muscle cramps (hypokalemia). This is a common and potentially dangerous complication of diuretic therapy that requires electrolyte monitoring and replacement. The furosemide dose may need adjustment, and potassium supplementation should be initiated.

225. D —. Existential questioning about the meaning and purpose of life is a spiritual concern that is best addressed through continued spiritual care — narrative life review, dignity therapy, legacy-building activities, and facilitated exploration of meaning. These are evidence-based interventions specifically designed for existential suffering at the end of life. Prescribing an anxiolytic for existential questioning medicalizes a fundamentally human experience.

226. B — The standard medical management approach for inoperable malignant bowel obstruction combines four agents targeting different mechanisms: octreotide (reduces GI secretion volume), anticholinergics/glycopyrrolate (reduces secretions and colicky pain), dexamethasone (reduces peritumoral edema and may partially restore bowel patency), and parenteral opioids (pain management — oral route is unreliable in obstruction). Metoclopramide is contraindicated in complete obstruction due to its prokinetic effect.

227. B —. The road metaphor effectively explains the organ failure trajectory: the overall direction is downhill, but the road has flat stretches and even small rises along the way. This helps families understand that good days within a declining trajectory are expected — not signs of recovery — without dismissing the genuine comfort these good days provide.

228. C — In severe hepatic impairment (Child-Pugh C), reduced first-pass metabolism of oral morphine increases its systemic bioavailability. Normally, approximately 70% of oral morphine is metabolized during first passage through the liver before reaching systemic circulation. When hepatic function is severely impaired, first-pass metabolism decreases, allowing a greater proportion of the oral dose to reach the systemic circulation. This effectively increases drug exposure at any given oral dose, necessitating dose reduction.

229. D--. Grief waves — sudden, intense surges of sadness triggered by sensory reminders — are a completely normal aspect of bereavement that can persist for months or years. The fact that the daughter is functioning well between waves is a sign of healthy adaptation, not avoidance. These experiences do not meet criteria for prolonged grief disorder (which requires persistent, pervasive functional impairment) and should be normalized, not pathologized.

230. B — The elevated calcium (14.5 mg/dL) is likely causing multiple worsening symptoms simultaneously — confusion (central calcium effects), constipation (decreased GI motility), polyuria (impaired renal concentrating ability), and potentially worsening pain (hypercalcemia lowers the pain threshold and causes bone pain). This represents a potentially reversible source of multi-symptom suffering. Treating the hypercalcemia (if consistent with the patient's goals) could simultaneously improve multiple symptom domains.

231. D — Hospice patients are not confined to their homes. Travel is permitted and should be supported. The hospice team can coordinate care across locations, ensure adequate medication supply for the trip, arrange for hospice services at the destination if needed, and plan for contingencies. The nurse's role is to facilitate the patient's desire to see her sister — an important, meaningful, time-sensitive goal — not to create barriers based on administrative concerns.

232. C — Before attributing agitation in advanced dementia to disease progression or terminal restlessness, common reversible causes must be assessed: bladder distension (catheterize if present), fecal impaction (disimpact if found), pain (assess with PAINAD and treat with an analgesic trial), medication effects (review for new or changed drugs), and infection (the low-grade fever may indicate UTI or pneumonia). These reversible causes are common, easily treatable, and frequently overlooked.

233. D — This statement requires a comprehensive clinical response: explore what is driving the thoughts (fear, loss of control, depression, existential distress), assess for major depression, optimize symptom management (his pain is 4/10, suggesting possible undertreated pain), secure the medications to prevent impulsive action, and involve the interdisciplinary team. Neither dismissing the statement nor removing all medications is appropriate.

234. B — Agonal breathing — irregular, gasping breaths at wide intervals — is a brainstem reflex that occurs in the final stage of dying. These gasps are not conscious respiratory efforts, do not indicate pain or distress, and do not require intervention. The patient is unaware of these movements. Clear, compassionate explanation to the family — that these reflexive gasps are expected and do not indicate suffering — is essential for reducing the distress that families experience when witnessing agonal breathing.

235. D — The data show that once palliative care is consulted, hospice referral occurs quickly (2 days). The bottleneck is the 12-day delay between hospital admission and palliative care consultation. The primary quality improvement opportunity is implementing earlier triggers for palliative care consultation — such as the surprise question, diagnosis-based triggers, or automatic referral criteria — so that patients are identified and referred to palliative care earlier in their hospital course.

236. C — This patient is on comfort measures with a DNR order and is experiencing a catastrophic intra-abdominal event causing severe distress. The appropriate response is aggressive symptom management: opioid bolus for severe pain, midazolam for distress and anxiety, and ongoing comfort care consistent with his documented goals. Hospital transfer and surgical evaluation are inconsistent with his comfort-focused plan. Observation without intervention allows unnecessary suffering.

237. A — This patient IS hypoxemic (SpO₂ 82–85%), which distinguishes him from the non-hypoxemic scenarios where oxygen provides no benefit over room air. In patients with documented hypoxemia (SpO₂ consistently below 90%), supplemental oxygen may provide genuine dyspnea relief by improving oxygen delivery. The evidence against supplemental oxygen applies specifically to non-hypoxemic patients. The oxygen should be titrated to comfort — targeting a saturation that correlates with symptom relief, not a specific number.

238. B — Nausea and vomiting with headache and papilledema in leptomeningeal carcinomatosis indicate increased intracranial pressure directly stimulating the vomiting center. This mechanism does not respond to ondansetron (5-HT₃ antagonist targeting the CTZ) or metoclopramide (prokinetic). Dexamethasone 16 mg IV reduces vasogenic edema and ICP, directly addressing the mechanism. This is the most targeted treatment for ICP-mediated emesis.

239. D — General Inpatient Care (GIP) is specifically for acute symptom management requiring inpatient-level care — not for caregiver respite. Caregiver exhaustion is the indication for Inpatient Respite Care (IRC), which has a different (lower) reimbursement rate and a maximum of 5 consecutive days. Billing GIP (higher reimbursement) for a respite need constitutes incorrect billing and can trigger audit findings, claim denials, and fraud allegations. Understanding the distinction between GIP and IRC is essential for compliance.

240. C — This response acknowledges the patient's love and concern for her husband, validates the emotion behind the question, and offers concrete, actionable support: social work connection to community resources, bereavement team support after her death, and facilitation of a joint conversation with her husband. It addresses both her immediate emotional need (being heard) and her practical concern (who will support her husband), and it does so without dismissing her worry or offering empty reassurance.